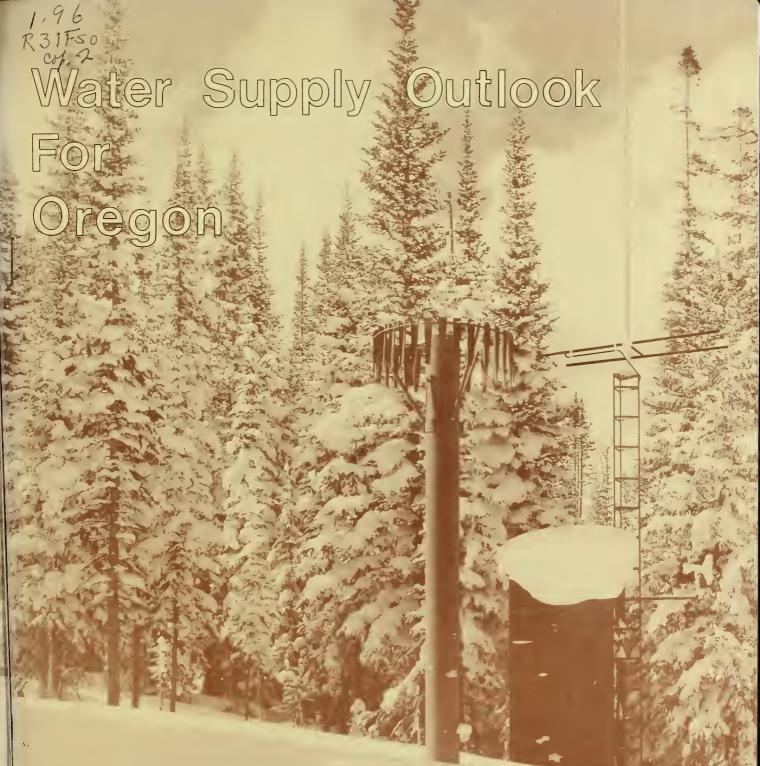
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SOIL CONSERVATION SERVICE U.S. DEPARTMENT OF AGRICULTURE

Cooperating with

OREGON DEPARTMENT OF WATER RESOURCES

MAR. 1, 1979

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: VIEW OF A SNOTEL DATA SITE IN THE SNOWY RANGE IN WYOMING. TALL CYLINDRICAL DEVICE IS A PRECIPITATION GAGE. SNOW PILLOWS ON THE GROUND NOT VISIBLE DUE TO SNOW COVER. SHELTER HOUSE, ANTENNA TOWER, ANTENNA, AND TEMPERATURE UNIT ARE VISIBLE BEHIND THE PRECIPITATION GAGE.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE **ADDRESS** Alaska Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504 Arizona Room 3008, Federal Building, 230 N. First Ave., Phoenix, Arizona 85025 Colorado (N. Mex.) P. O. Box 17107, Denver, Colorado 80217 Idaho Room 345, 304 N. 8th. St., Boise, Idaho 83702 Montana P. O. Box 98, Bozeman, Montana 59715 Nevada P. O. Box 4850, Reno, Nevada 89505 1220 S. W. Third Ave., Portland, Oregon 97204 Oregon 4420 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138 Utah Washington 360 U. S. Court House, Spokane, Washington 99201 Wyoming P. O. Box 2440, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W, Calgary, Alberta T3C 1A6.



WATER SUPPLY OUTLOOK FOR OREGON

and FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued

MARCH 1, 1979

Issued by

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SOIL CONSERVATION SERVICE
WASHINGTON D C

Released by

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STATE CONSERVATIONIST SOIL CONSERVATION SERVICE PORTLAND OREGON

In Cooperation with

OREGON
DEPARTMENT
OF
WATER RESOURCES

Report prepared by

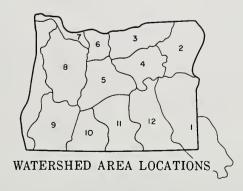
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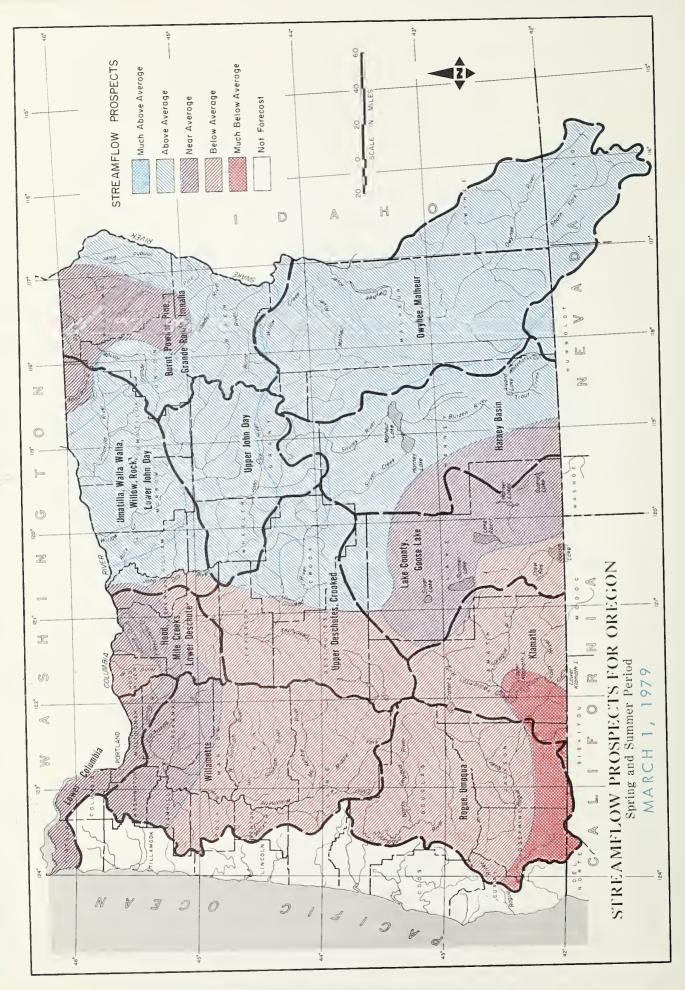
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TABLE OF CONTENTS

					PAGE
	STI	REAMFLOW PROSPECTS FOR O	REGON	(MAP)	FACING PAGE 1
	WA	TER SUPPLY OUTLOOK FOR O	REGON		1
		DETAILED WATER SU	PPLY OUTLO	OOK BY MAJOR WATE	RSHED AREAS
AREA	1	OWYHEE, MALHEUR			3
AREA	2	BURNT, POWDER, PINE, GR	ANDE RONDE	E. IMNAHA	5
AREA	3	UMATILLA, WALLA WALLA.	WILLOW. R	OCK, LOWER JOHN D	AY 7
AREA	4	UPPER JOHN DAY			9
AREA	5	UPPER DESCHUTES, CROOKE	D		11
AREA	6	HOOD, MILE CREEKS, LOWE	R DESCHUTE	s	13
AREA	7	LOWER COLUMBIA			15
AREA	8	WILLAMETTE			17
AREA	9	ROGUE, UMPQUA			19
AREA	10	KLAMATH			21
AREA	11	LAKE COUNTY. GOOSE LAKE			23
AREA	12	HARNEY BASIN			25
	BA	SIC DATA SUPPLEMENTS	 	SNOW SOIL MOISTURE PRECIPITATION	
	MAI	P AND INDEX OF OREGON SNO	OW COURSES	5 (MAP)	
	1.19	ST OF COORERATORS			LUCIDE DACK COVED





WATER SUPPLY OUTLOOK AND SUMMARY FOR OREGON

MARCH 1, 1979

- * Unusually heavy amounts of snow fell in Oregon's mountains during *

 * February. As a result the water supply outlook has improved *

 * dramatically from last month. Adequate supplies are forecast for *

 * all of Oregon except for those streams which originate in the *
- * southern Cascades where summer streamflow is expected to be below * average.

SNOW COVER

The mountain snowpack is much above average in Malheur County, the Blue Mountains above Pendleton and in the headwaters of the Crooked River. It is above normal on the Burnt, Powder, John Day and Silvies drainages and in the Steens mountains in Harney County. A near average snowpack exists in the Wallowa mountains and northern Cascades around Mt. Hood. Below average snow cover exists in the central Cascades and a poor snowpack still persists in the southern Cascades and the Siskiyou's.

PRECIPITATION

Valley precipitation during the November-February winter period has been 80 to 110% of average in Eastern Oregon and 60 to 70% of average in Western Oregon. Storms were plentiful during the month of February and provided the state with much above normal precipitation in all areas. Amounts ranged from 120% of average on the Lower John Day up to 190% on the Hood River.

SOIL MOISTURE

Soil moisture beneath the snowpack is still below normal in most areas. This is due to the very dry fall and early winter experienced up to when the snowpack started to accumulate. These dry soils will absorb more snow melt than usual.

RESERVOIR STORAGE

Reservoir storage is close to normal for March 1 in most of the major irrigation reservoirs. Twenty-seven reservoirs are currently storing 2,017,000 acre feet compared to the normal of 2,192,000 acre feet.

STREAMFLOW

Most streams flowed at above average amounts during February. Streams originating in areas where the precipitation was received as snow flowed at much below normal amounts.

Forecasts of prospective streamflows on representative Oregon streams are as follows:

STREAM	PERIOD	FORECAST % of 1958-72 AVG.
Owyhee net Inflow	MarJuly	168
Malheur nr. Drewsey	MarJuly	128
Deschutes at Benham Falls	AprJuly	80
Grande Ronde at La Grande	MarJuly	120
Willamette, Mid. Fk. nr. Oakridge	AprJuly	86
Upper Klamath Lake net Inflow	MarJuly	70
Rogue nr. Raygold	AprJuly	76
Silvies nr. Burns	MarJuly	128



This report contains data furnished by the Oregon Department of Water Resources, U.S. Geological Survey, NOAA National Weather Service and other cooperators.

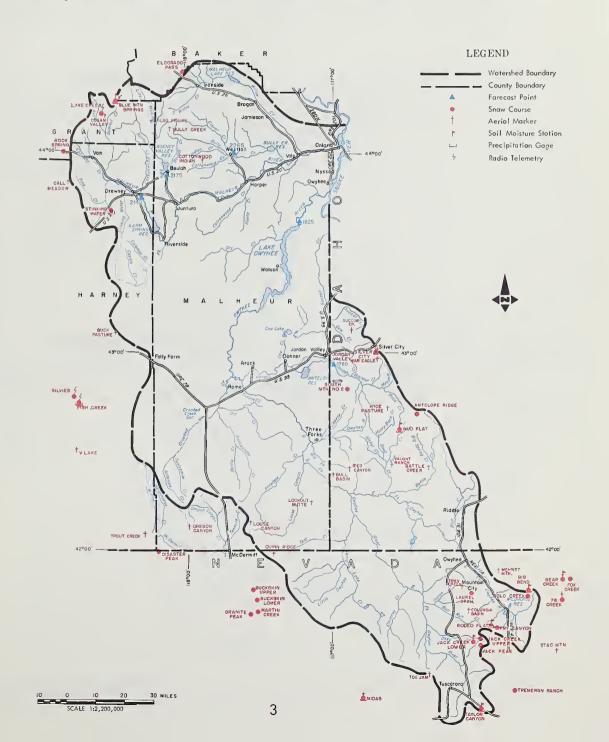
WATER SUPPLY OUTLOOK

OWYHEE, MALHEUR WATERSHEDS

OREGON

GENERAL OUTLOOK

Water supply forecasts for this area are now excellent, ranging from 128% to 168% of average. Snowpack is 125% to 135% of average. February precipitation was 163% of normal which brought seasonal precipitation to near normal levels. Current storage is slightly below normal on Beulah, Bully Creek, and Warmsprings Reservoirs but Owyhee Reservoir is above normal. Soil moisture is near average.



STREAMFLOW FORECASTS		THIS YEA	R	PAST	RECORD	
	FORE	CAST	FORECAST	THOUSAND ACRE FEET		
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Rercent of Average	PERIOD	Last Year	Average C	
Bully Creek at Warmsprings Malheur near Drewsey Malheur, North Fork at Beulah Owyhee Reservoir net Inflow	20 120 92 95 83 724 546	145 128 128 132 130 168 164	MarMay MarJuly AprSept. MarJuly AprSept. MarJuly AprSept.	676 456	13.9 94 72 72 64 431 332	

FORECAST DATE of LOW FLOW VALUES

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

		L Consent Data						
FORECAST POINT	Low Flow Value	Forecast Date Stream Will Recede to Low	OI LOW FIGW I	RESERVOIR	Usable	Usable Storage This Last		
	Second/Ft.	Flow Value	Value		Capacity	This Year	Year	Average ^C
Owyhee near Rome	1000 250	June 15 July 10	May 24 June 20	Beulah Reservoir Bully Creek Owyhee Warmsprings	60.0 30.0 715.0 191.0	20.0 11.7 599.8 87.6	22.1 20.9 310.4 40.9	34.2 15.8 516.8 108.2

SOIL MOISTURE

SUMMARY OF SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

					(COMPARISON WITH PREVIOUS YE	AKS)		
RIVER BASIN	Number THIS YEAR'S MOISTURE as PERCENT OF:			RIVER BASIN and/or	Number of Courses	THIS YEAR'S SNOW WATER AS PERCENT OF		
	Stations	Last Year	Average C) [SUB-WATERSHED	Averaged	Last Year	Average C
Malheur River	2	85	93		Jordan Creek Malheur River Owyhee River Bully Creek	2 5 7 2	101 114 104 86	125 133 135 140

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

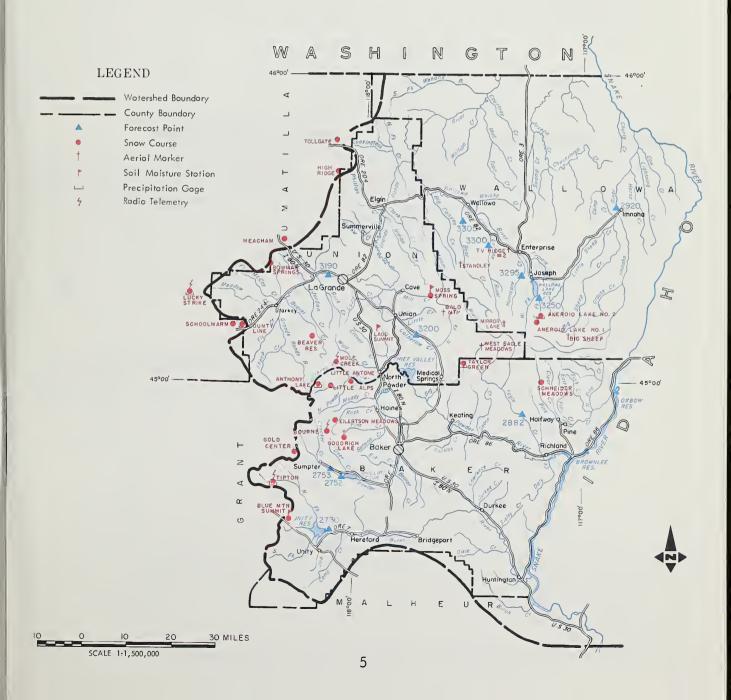
WATER SUPPLY OUTLOOK

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS

OREGON

GENERAL OUTLOOK

Streamflow forecasts for this area are near to above average, ranging 87% to 132%. February precipitation was 150% of normal which brought the snowpack up to 93% to 126% on major drainages. Area reservoirs report near normal storage. Soil moisture is near to slightly below normal. Adequate water supply should be available in the coming months.



REAMFLOW FORECASTS		THIS YEA	PAST RECORD			
	FORE	CAST	FORECAST	THOUSAND ACRE FEET		
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average	
Bear near Wallowa	69	105	Ann Sont		66	
Burnt near Hereford	53	125	AprSept. MarJuly		66 42	
burne near neretora	49	125	AprSept.		33	
Catherine near Union	65	100	AprSept.		65	
Eagle Creek abv. Skull Creek	198	1113	AprJuly		175	
Eugle often aby. Skall often	217	114	AprSept.		190	
Grande Ronde at La Grande	232	120	MarJuly	211	193	
aranae Nonae as Ea Granae	190	120	AprSept.	158	158	
Hurricane near Joseph	42	90	AprSept.		47	
Imnaha at Imnaha	340	111	AprSept.		307	
Lostine near Lostine	109	87	AprSept.		125	
Powder near Sumpter	70	127	AprJuly		55	
'	70	124	AprSept.		56	
Wallowa, East Fork near Joseph	11.4	93	MarSept.		12.2	
	10.5	92	AprSept.		11.4	
Wallowa at Joseph	68	90	May-July		76	
Wolf Creek net Inflow	17.5	132	MarJune		13.3	

RESERVOIR STORAGE (T	housand .	Ac. Ft.)	END OF M	ONTH		
BESE BYOLD	Usable	Usable Storage				
RESERVOIR	Capacity	This Year	<u>Last</u> Year	Average C		
Phillips Lake Thief Valley Unity Wallowa Lake Wolf Creek	73.5 17.4 25.2 37.5 10.4	44.7 17.4 13.5 29.8 5.9	18.9 17.4 16.3 15.8 3.1	50.1 17.3 15.0 22.5		

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS	YEARS)			
RIVER BASIN and/or	Number of Courses	THIS YEAR'S SNOW WATER AS PERCENT OF		
SUB-WATERSHED	Averaged	Last Year	Average C	
Burnt River Grande Ronde River above La Grande Powder River Wallowa, Imnaha, Catherine Creek	4 4 5	109 187 109 85	121 126 112 93	

SOIL MOISTURE					
RIVER BASIN	Number of	THIS YEAR'S MOISTURE as PERCENT OF:			
	Stations	Last Year	Average C		
Burnt, Powder Grande Ronde, Catherine	2	66	79		
Creek, Imnaha River	3	85	92		

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

OREGON

GENERAL OUTLOOK

Forecasts are generally for much above normal streamflow in this area. Volume forecasts range from 108% to 167% of average. The snowpack is 134% to 156% of average. February precipitation was 120% of average. Cold Springs reservoir reports below average storage while McKay is above average. Soil moisture recharge is near normal on mountain watersheds.



TREAMFLOW FORECASTS		THIS YEAR	,	PAST F	RECORD	
	FORE	CAST	FORECAST	THOUSAND ACRE FEET		
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average C	
McKay near Pilot Rock Umatilla near Gibbon Umatilla near Pendleton Walla Walla, South Fork near Milton Butter Creek nr. Pine City	40 40 127 104 275 202 85 71	167 167 131 138 140 140 108 108 108	AprJuly AprSept. MarSept. AprSept. MarSept. AprSept. AprSept. MarSept. AprJuly		24 24 97 75 200 144 79 66 11.4	

FORECAST DATE of LOW FLOW VALUES

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

TOREGAST DATE OF LOW				KESEKANIK SINKARE (i iiousaiiu	AU. FL.)	ENDOF	MONTH
FORECAST POINT	Low Flow Value	Forecast Date Stream Will	Average Date of Low Flow	RESERVOIR	Usable	Usable Storage		
TORCCAST FORM	Second/Ft.	Recede to Low Flow Value	Value	KESEKVOIK	Capacity	This Year	Last Year	Average C
Umatilla at Pendleton	550	June 10	May 22	Cold Springs McKay	50.0 73.8	24.9 47.4	38.0 40.2	40.0
					:			

SOIL MOISTURE

SUMMARY OF SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

	and/or (umber of Courses Averaged	THIS YE WATER AS Last Year 252 211	AR'S SNOW PERCENT OF Average C
Umatilla, Walla Walla, McKay Creek 3 93 87 McKay	y Creek illa River	Averaged	252	156
McKay Creek 3 93 87 McKay	illa River	3 3 2		
			170	134

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK

UPPER JOHN DAY WATERSHEDS

OREGON

GENERAL OUTLOOK

Above average water supply, 114% to 145% of average, is forecast for this area. February precipitation was 155% of average. Snowpack water is 122% to 130% of normal over the area. Soil moisture ranges from near normal to somewhat below normal in the mountain areas.



STREAMFLOW FORECASTS		THIS YEAR	3	PAST	RECORD
	FORE	CAST	FORECAST	THOUSAND	ACRE FEET
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average C
Camas Creek near Ukiah John Day, Middle Fork at Ritter John Day, North Fork at Monument Strawberry near Prairie City	55 43 160 139 800 675 10.4 10.5	128 130 114 118 124 125 145 138	MarJuly AprSept. MarJuly AprSept. MarJuly AprSept. MarJuly AprSept.		43 33 129 108 646 540 7.2 7.6

SOIL MOISTURE

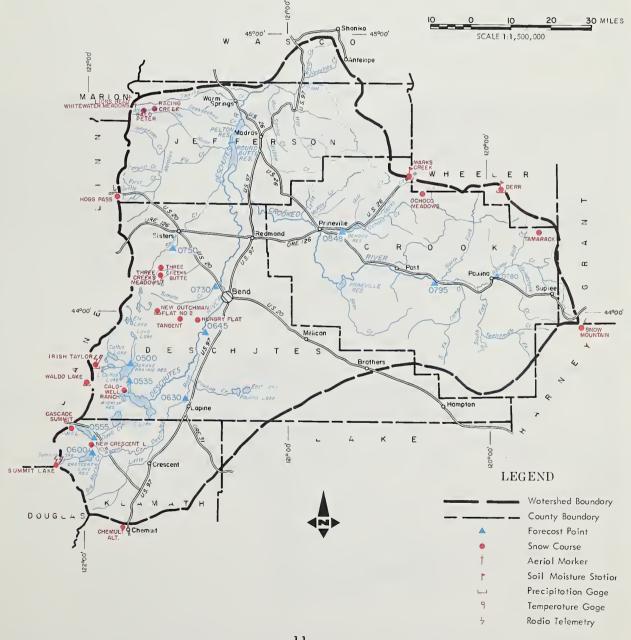
SUMMARY OF SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN	Number	THIS YEAR'	S MOISTURE ENT OF:		RIVER BASIN and/or	Number of Courses	THIS YE WATER AS	AR'S SNOW PERCENT OF
	Stations	Last Year	Average C		SUB-WATERSHED	Courses Averaged	Last Year	Average C
John Day above Dayville John Day, North Fork	3	85	71 94	Johr Johr	n Day, North Fork n Day abv. Dayville	7 5	145 114	130 122

UPPER DESCHUTES, CROOKED WATERSHEDS **OREGON**

0 U T L O O K GENERAL

Water supply conditions vary over this area. The Ochoco-Crooked River forecasts are for 128% to 140% of average streamflow. Snowpack in this drainage is 146% of average. In contrast, the general Deschutes River drainage is forecast to deliver about 80% of average streamflow. Snowpack here is 72% to 80% of normal. February precipitation for the area as a whole was 147% of average. Ochoco and Prineville reservoirs have above average storage, Wickiup is average, and Crane Prairie and Crescent Lake are below average. Mountain soil moisture is below normal.



REAMFLOW FORECASTS		THIS YEAR			RECORD
	FORE	FORECAST FORECAST			ACRE FEET
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average
Beaver Creek near Paulina	22 22	138 138	AprJuly AprSept.		16 16
Crane Prairie Reservoir total Inflow Crescent at Crescent Lake	93 17.5	78 83	AprSept. MarJuly		119 21
Crooked near Post	18.1 173 117	82 128 128	AprSept. MarJuly AprSept.		22 135 91
Deschutes at Benham Falls	288 462	. 80 84	AprJuly AprSept.		360 550
Deschutes below Snow Creek	53 49	78 78	MarSept. AprSept.		69 62
Deschutes, Little near La Pine	70 62	80 76	MarJuly AprSept.		88 82
Ochoco Reservoir net Inflow	38 24	140 125	MarJuly AprSept.		27 18.8
Squaw near Sisters Tumalo near Bend	40 37	80 85	AprSept. AprSept.		50 44

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Crane Prairie net Inflow Crooked R. near Post Deschutes at Bend Little Deschutes near La Pine	300 100 1500 400 200	1/ June 6 1/ May 21 June 13	July 15 June 1 July 1 June 7 July 8
<u>l</u> / Issued April l			

<u>RESERVUIR STURAGE (</u>	Inousand	Ac. Ft.)	END OF	MONTH
RESER∀OIR	Usable	U	sable Stora	gc
RESERVOIR	Capacity	This Year	Last Year	Average ^C
Crane Prairie Crescent Lake Ochoco Prineville Wickiup	55.3 86.9 47.5 153.0 200.0	39.7 43.1 32.5 118.5 173.5	49.0 52.9 31.1 105.5 170.5	46.1 63.5 28.8 101.1 173.2

SOIL MOISTURE

THIS YEAR'S MOISTURE as PERCENT OF: Number of Stations RIVER BASIN Last Year Average C Crooked R., Upper Deschutes River 1 65 73

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YE	=AR3/			
RIVER BASIN and/or	Number of Courses	THIS YEAR'S SNOW WATER AS PERCENT OF		
SUB-WATERSHED	Averaged	Last Year	Average C	
Crooked, Ochoco Deschutes abv. Wickiup Little Deschutes Tumalo & Squaw Crs.	4 4 4 3	134 104 89 108	146 72 80 79	

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

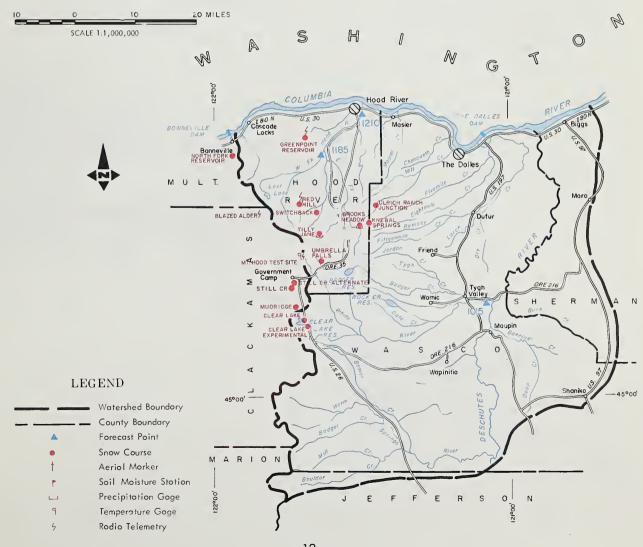
WATER SUPPLY OUTLOOK

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

OREGON

GENERAL OUTLOOK

Near normal to slightly below normal water supply is forecast for this area but no serious shortages are anticipated. Forecasts range from 85% to 100% of normal. The snowpack is 90% to 155% of average. Area precipitation for February was 187% of average. Reported reservoir storage is much below average.



REAMFLOW FORECASTS		THIS YEAR			PAST RECORD	
	FORE	CAST	FORECAST	THOUSAND A	CRE FEET	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average	
Hood River near Hood River Hood, West Fork near Dee White below Tygh Valley	243 282 112 131 118 133	85 85 85 100 100	AprJuly AprSept. AprJuly AprSept. AprJuly AprSept.		286 332 132 154 118 133	

FORECAST DATE of LOW FLOW VALUES

RESERVOIR	STORAGE	(Thousand A	c. Ft.	END OF MONTH
-----------	---------	-------------	--------	--------------

	Low Flow	Forecast Date	Average Date	RESERVOIR STORAGE (sable Stor	
FORECAST POINT	Value Second/Ft,	Stream Will Recede to Low Flow Value	of Low Flow Value	RESERVOIR	Usable Capacity	This Year	Last Year	Average (
Clear Branch Inflow	* 38	July 15-31	**39	Clear Lake (Wasco)	11.9	0.1	3.7	4.6
* Average cfs forecast to flow for this two-week period.	•						i.	
** Average cfs for period of record								
				SUMMARY OF SNOW ME. (COMPARISON WITH PREVIOUS		ENTS	I	
				RIVER BASIN and/or SUB-WATERSHED	Number Course Averag	es WA	THIS YEAR TER AS PE st Year	R'S SNOW RCENT OF Average
				Hood River Mile Creeks	5	131	2	90 115
				White River	3	17!		98
(a) Estimated. (b) 1963-	-77 adjusted	average. (c)	1963-77, 15	,				

WATER SUPPLY OUTLOOK LOWER COLUMBIA WATERSHEDS OREGON

GENERAL OUTLOOK

Normal streamflow is expected on the Sandy River. The Columbia at The Dalles is forecast at 87% of normal flow.



SUMMARY OF SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or	Number of Courses		AR'S SNOW PERCENT OF
SUB-WATERSHED	Averaged	Last Year	Average C
Sandy River	2	168	96

STREAMFLOW FORECASTS	THIS YEAR FORECAST PRECAST POINT Thousand Acre Feet Percent of Average PERIOD		PAST	RECORD	
	FORE	CAST	FORECAST	THOUSAND	ACRE FEET
BASIN, STREAM and/or FORECAST POINT		Percent of Average		Last Year	Average ^C
Columbia at The Dalles Sandy River near Marmot	61,976 89,700 343 398	87 87 100	AprJune AprSept. AprJuly AprSept.		71,237 103,493 343 398

HISTORICAL DATA (Columbia River at The Dalles)

	:	STREAMFLOW d (1,000 A.F.	REGULATED PEAK		
YEAR	APR - SEPT.	APR — JUNE	MAY - JUNE	(1,000 c.f.s)	DATE
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1963	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18
1965	114,137	80,024	62,477	520	June 9
1966	87,268	58,120	45,922	396	June 12
1967	107,771	72,408	65,112	622	June 10
1968	89,000	55,500	47,900	404	June 13
1969	112,300	85,700	63,800	515	May 15
1970	88,100	62,800	55,200	425	May 28
1971	122,900	88,400	73,700	557	May 13
1972	134,700	96,400	81,400	619	June 20
958-72 Avg.	104,300	72,900	59,900	529	

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

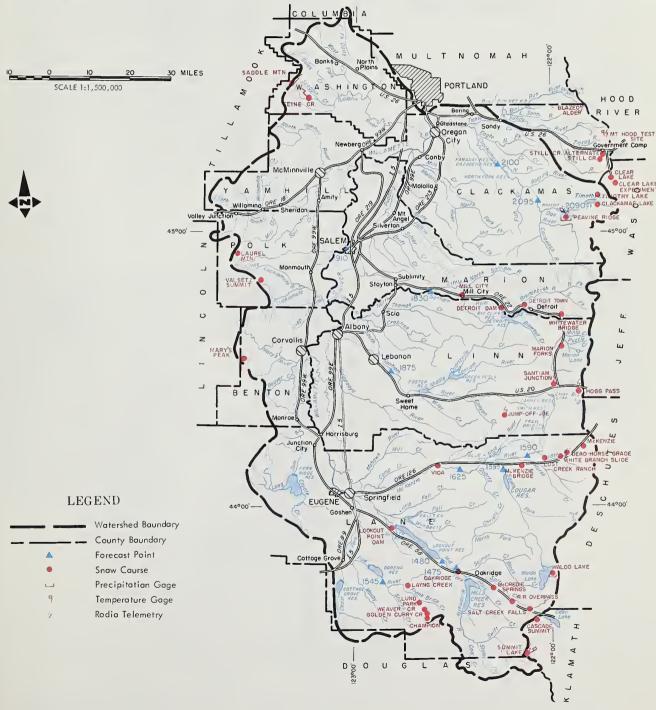
				DRAINA	GE DISTRICT PUM	PHOUSE		
VANCOUVER	FLOW AT	SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSO
GAGE	THE DALLES				RIVER MILES			
(Weather Bu.)	(1,000 c.f.s)	118.9	96.0	91.0	77.0	62.0	52.0	47. 0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32 (1972)	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

GENERAL OUTLOOK

The water supply outlook for the Willamette basin has improved since last month. Streamflow is forecast at 83% to 95% of average and no serious shortages are anticipated. The snowpack is now 70% to 99% of average on major drainages, a result of the 149% of normal February precipitation. Reservoir storage is well above average in the Cascades.



	THIS YEAR	,	PAST RECORD		
FORE	CAST	FORECAST	THOUSAND	ACRE FEET	
Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average 10	
640	95	AprJuly		674	
466	92	AprJuly		798 507 604	
377	83	AprJuly		454 599	
880	85	AprJuly		1,035 1,263	
179 203	85 85	AprJuly AprSept.		210 239	
106 144	86 90	AprJuly AprSept.		123 162	
83 87	85 85	AprJuly AprSept.		98 102	
741	85	AprJuly AprSept.		765 872	
516	85	AprSept.		564 607	
670	86	AprSept.	463 578	678 779	
180	86	AprSept.		189 209	
3,/3/ 4,202	85 85	AprJuly AprSept.		4,397 4,943	
	Thousand Acre Feet 640 750 466 556 377 500 880 1,074 179 203 106 144 83 87 650 741 479 516 583 670 163 180 3,737	Thousand Acre Feet	Thousand Acre Feet Percent of Average PERIOD 640 95 AprJuly 750 95 AprSept. 466 92 AprJuly 556 92 AprSept. 377 83 AprSept. 880 85 AprJuly 1,074 85 AprJuly 203 85 AprJuly 203 85 AprSept. 106 86 AprJuly 144 90 AprSept. 83 85 AprJuly 144 90 AprSept. 83 85 AprJuly 87 85 AprJuly 87 85 AprJuly 87 85 AprJuly 88 AprSept. 479 85 AprJuly 516 85 AprJuly 670 86 AprSept. 583 86 AprJuly 670 86 AprSept. 163 86 AprSept. 163 86 AprSept. 3,737 85 AprJuly	Thousand Acre Feet	

SUMMARY OF SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or

RIVER BASIN	Number of Courses		AR'S SNOW PERCENT OF	RESERVOIR	Usable	U	sable Stora	ge
and/or SUB-WATERSHED	Averaged	Last Year	Average C	RESERVOIR	Capacity	This Year	<u>Last</u> Year	Average
Clackamas River McKenzie River Row River Santiam River Willamette, Mid Fk.	2 3 2 4 5	261 216 144 214 116	99 77 85 80 70	Blue River Cottage Grove Cougar Detroit Dorena Fall Creek Fern Ridge Foster Green Peter Hills Creek Lookout Point Timothy Lake Henry Hagg Lake *Multiple purpose reservoirspace reserved primarily for flood runoff.	85.6* 30.0* 155.2* 299.9* 70.5* 115.0* 94.2* 30.0* 270.0* 200.0* 337.2* 61.7 53.0	8.8 59.8 135.2 19.8 51.0 46.8 3.6 125.4 100.3	41.0 79.1 16.5 32.0 32.3 2.7 70.0 65.5 85.0 53.3	27.8 8.0 41.2 97.6 18.7 35.1 35.5 5.7 97.1 60.0 94.0 54.8

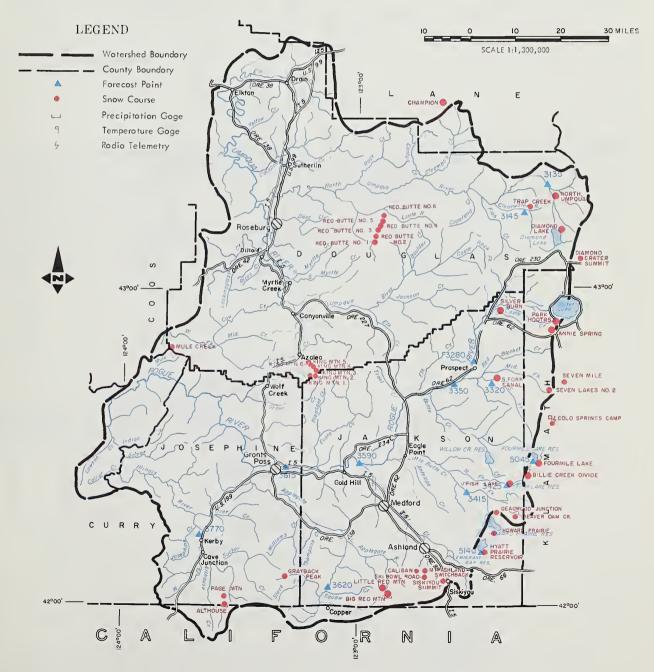
RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK ROGUE, UMPQUA, WATERSHEDS OREGON

GENERAL OUTLOOK

Water supply forecasts in this area generally range from 65% to 80% of average in the southern Cascades and 48% to 51% in the Siskiyou area. Water users in this area may experience water shortages if they do not have access to reservoir regulated supplies. The snowpack is only 52% to 68% of normal even though February precipitation was 143% of average. Among the major area reservoirs only Emigrant Lake reported above average storage.



STREAMFLOW FORECASTS THIS YEAR PAST RECORD FORECAST THOUSAND ACRE FEET FORECAST BASIN, STREAM and/or FORECAST POINT Thousand Acre Feet Percent of Average Last Year Average C PERIOD 64 48 Apr.-Sept. 133 Applegate near Copper Clearwater above Trap Creek 62 90 Apr.-Sept. 69 Fourmile Lake net Inflow 3.0 70 Apr.-Sept. 4.3 Apr.-July 4.6 Hyatt Reservoir net Inflow 3.0 65 Illinois River near Kerby 97 51 Apr. - July 191 100 51 Apr.-Sept. 197 Little Butte, N. Fk. at Fish Lake nr. Lake Cr. Little Butte, S. Fk. near Lake Creek 9.5 70 Apr.-Sept. 13.7 19.6 28 70 Apr.-July Apr.-July Rogue above Prospect 205 80 256 248 80 Apr.-Sept. 311 70 Rogue, South Fork near Prospect 43 Apr.-July 61 50 69 Apr.-Sept. 72 Apr.-July Apr.-Sept. 76 529 735 Roque at Raygold near Central Point 559 675 76 691 890 Apr.-Sept. Roque at Grants Pass 623 70 890 Apr.-Sept. 166 Umpqua, No. blw. Lemolo Res. nr. Toketee Falls 127 77

FORECAST DATE of LOW FLOW VALUES

RESERVOIR STO	ORAGE (Thousand	Ac. Ft.)	END OF MONTH
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				WESTKAOIK STOWAGE CA			LITE OF	11011111
FORECAST POINT	Low Flow Value	Forecast Date Stream Will Recede to Low	Average Date of Low Flow	RESERVOIR	Usable		sable Stor	age
	Second/Ft.	Flow Value	Value	NESEK VOIII	Capacity	This Year	Last Year	Average c
Little Butte Creek, South Fork	100	May 1	May 27	Emigrant Lake Fish Lake Fourmile Lake Howard Prairie Hyatt Prairie Lost Creek	39.0 8.0 16.1 60.0 16.1 315.0	31.5 5.7 7.5 35.5 11.3 224.2	33.3 4.8 7.1 36.9 10.6 	29.3 6.0 9.9 45.7 12.4
				SUMMARY OF SNOW ME (COMPARISON WITH PREVIOUS RIVER BASIN and/or SUB-WATERSHED		er of w	THIS YEAR ATER AS PE	R'S SNOW ERCENT OF Average C
				Applegate Bear Creek Butte Creek Illinois River North Umpqua Rogue River		2 1 3 1	50 70 90 87 30 72	53 52 54 64 68 57

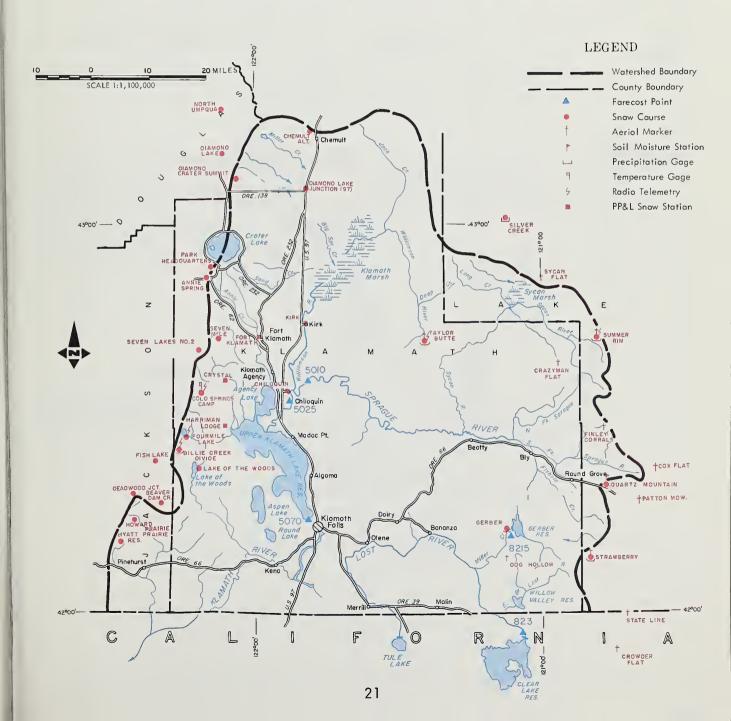
⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK KLAMATH WATERSHEDS

OREGON

GENERAL OUTLOOK

Water supply in this area is not expected to be up to normal levels. Forecasts range from 88% for Clear Lake and Gerber reservoirs to 66% on the Williamson River. The snowpack varies from 102% to 56% of average on these drainages. Area precipitation for February was 122% of average. Gerber and Clear Lake reservoirs have much below average storage while Upper Klamath Lake is near average. Soil moisture is below average on reporting mountain watersheds.



STREAMFLOW FORECASTS		THIS YEAR	R	PAST I	RECORD
	FORE	CAST	FORECAST	THOUSAND A	CRE FEET
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	THOUSAND A Last Year	Average C
Clear Lake Reservoir Inflow Gerber Reservoir Inflow Sprague near Chiloquin Upper Klamath Lake net Inflow Williamson below Sprague River	59 27 203 180 507 370 275	88 88 75 74 70 69 66	MarJuly MarJuly MarJuly AprSept. MarJuly AprSept. AprSept.	530	67 31 271 242 724 536 414

SOIL MOISTURE

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RIVER BASIN	Number		S MOISTURE	RESERVOIR	Usable		Jsable Stor	age
	Stations	Last Year	Average C	RESERVOIR	Capacity	This Year	Last Year	Average C
Upper Klamath	1	122	86	Clear Lake Gerber Upper Klamath Lake	440.2 94.0 584.0	153.0 176. 36.1 39. 406.2 398.		250.7 55.9 409.6
				SUMMARY OF SNOW ME (COMPARISON WITH PREVIOUS RIVER BASIN and/or SUB-WATERSHED		r of WA	THIS YEAR TER AS PE	'S SNOW RCENT OF Average C
				Lost River Sprague River Upper Klamath Williamson River	4 3 6 3	7	8 8	102 86 64 56

WATER SUPPLY OUTLOOK

LAKE COUNTY, GOOSE LAKE WATERSHEDS OREGON

GENERAL OUTLOOK

Water supply forecasts are generally good for this area with some possible exceptions. The Chewaucan River is only forecast at 78% of normal while the rest of the area ranges from 85% to 104% of average. The snowpack has a similar variation, 86% to 120% of average. Area precipitation was 133% of normal. Cottonwood reservoir has above average storage but Drews and Thompson Valley are below average.



ΔDIN MTN

TREAMFLOW FORECASTS		THIS YEAR	3	PAST F	RECORD
	FORE	CAST	FORECAST	THOUSAND A	CRE FEET
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average C
Chewaucan near Paisley Deep above Adel Drews Reservoir net Inflow Honey Creek near Plush Silver Creek near Silver Lake Twentymile near Adel	67 76 35 19.6 13.0 27	78 98 85 98 95 104	MarJuly MarJuly MarJuly MarJuly AprJuly MarJuly	86	87 78 41 20 13.7 26

SOIL MOISTURE

RESERVOIR	STORAGE	(Thousand	Ac.	Ft.)	END OF MONTH
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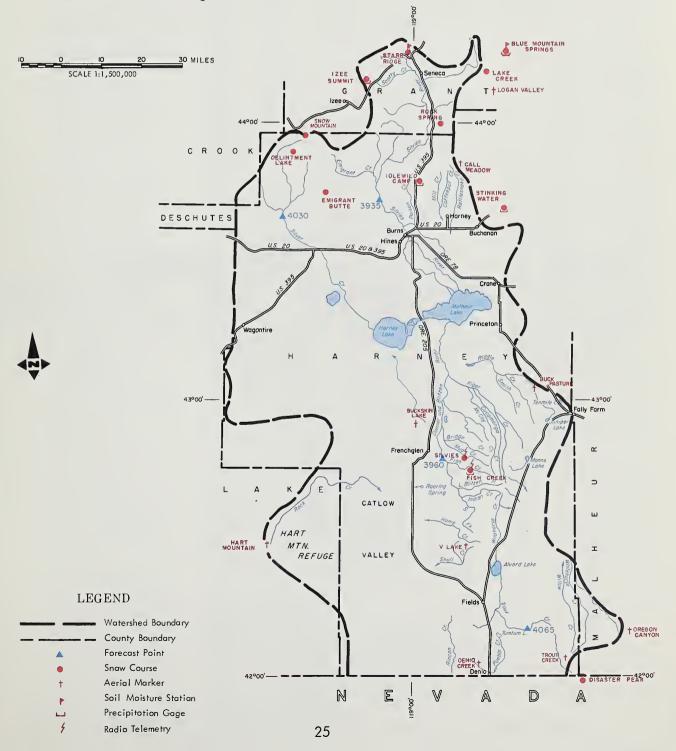
				RECEIVED STORAGE C.				11011111
RIVER BASIN	Number of	THIS YEAR'	S MOISTURE ENT OF:	RESERVOIR	Usable		sable Stora	
	Stations	Last Year	Average C		Capacity	This Year	Last Year	Average C
Chewaucan, Silver Creek, Drew Creek Honey, Deep, 20-Mi. Cr.	1	122 87	87 89	Cottonwood Drews Thompson Valley	8.7 63.0 19.5	3.7 34.3 8.6	25.1	3.5 42.9 15.3
				SUMMARY OF SNOW ME (COMPARISON WITH PREVIOUS RIVER BASIN and/or SUB-WATERSHED		r of WA	THIS YEAR TER AS PE st Year	'S SNOW RCENT OF Average C
				Chewaucan River Deep Creek Drew Creek Honey Creek Silver Creek Twentymile Creek	3 3 3 3 2 2	1 1	78 10 31 24 71 74	86 120 97 114 94 120

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

GENERAL OUTLOOK

Excellent water supplies are expected in Harney County. Water supply forecasts range from 110% to 128% of average. Snowpack water is 111% to 159% of average on major drainages. February precipitation was 142% of average.



REAMFLOW FORECASTS	THIS YEAR			PAST RECORD		
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	FORECAST PERIOD	THOUSAND A	ACRE FEET Average	
Donner und Blitzen near Frenchglen Silver near Riley Silvies River near Burns Trout Creek near Denio	61 58 20 120 95 10.5 10.0	110 110 128 128 128 125 127	MarJuly AprSept. AprJuly MarJuly AprSept. MarJuly AprSept.	128	55 53 15.6 94 74 8.4 7.9	

SOIL MOISTURE

SUMMARY OF SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

THIS YEAR'S MOISTURE as PERCENT OF: THIS YEAR'S SNOW WATER AS PERCENT OF RIVER BASIN Number of Courses Averaged Number RIVER BASIN of Stations and/or SUB-WATERSHED Last Year Average C Last Year Average C Donner und Blitzen R. Silver Creek Silvies River, Silver Cr. 81 84 3 4 100 111 Trout Cr., Donner und Blitzen River 3 112 140 Silvies River 4 134 134 Trout Creek 109 159

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

MARCH 1, 1979

W	THIS	SYEAR	PAST REC.	SNOW	Th	HIS YE	AR		REC.
NAGE BASIN and/or SNOW COURS	JRSE of D	Snow Water Depth Cont	(inches)	DRAINAGE BASIN and/or SNOW COURSE			Water Cont.	(incl	hes)
	DS Survey Control Co	30 8.9 23 6.4 17.0 38 9.4 14.8 56 17.5 58 14.8 56 17.5 57 7.0 43 15.1 57 7.0 43 10.5 33 1 3.5 43 23.2 23 2 23.2 21 10.5 23 2 23.2 21 10.5 31 30 7.7 42 10.5 31 10.5 32 31 10.5 33 10.5 34 10.5 35 10.5 36 10.5 37 10.5 38 1	9.2 5.8 5.0 3.2 20.7 17.9 9.5 7.5 14.4 14.2 11.3 3.4 2.3 1.2 2.4 0.0 2.1 6.9 3.7 13.4 8.1 0.7 0.4 15.9 11.6 6.6 3.1 7.5 5.2 23.8 20.0 27.4 20.5 23.8 20.0 27.4 20.5 23.8 20.0 27.4 20.5 23.8 20.0 27.4 20.5 23.8 20.0 27.4 20.5 23.8 20.0 27.4 20.5 23.8 20.0 27.4 20.5 23.8 20.0 27.4 20.5 23.8 20.0 27.4 20.5 20.5 20.5 20.5 20.5 20.5 20.5 20.5	BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS Aneroid Lake #1 Aneroid Lake #2 Anthony Lake Bald Mountain (OR) * Beaver Reservoir (Rev.) Beaver Res. Pillow (S) Beaver Res. Pillow (M) Big Sheep * Blue Mtn. Summit Bourne Bourne Pillow (T) Bourne Pillow (S) Bourne Pillow (M) County Line County Line Pillow (M) Dooley Mountain Eilertson Meadows Eilertson Meadows Plw. (M) Eldorado Pass Gold Center Gold Center Pillow (M) Goodrich Lake Little Antone Little Antone Little Antone Little Antone (Alt.) Lucky Strike Pillow (T) Lucky Strike Pillow (S) Cucky Strike Pillow (M) Meacham Mirror Lake * Moss Spring Moss Spring Pillow (M) Meacham Mirror Lake * Moss Spring Pillow (M) Schneider Meadow Plw. (S) Schneider Meadow Plw. (S) Schneider Meadow Plw. (S) Taylor Green Taylor Green Pillow (M) Tipton Tipton Snow Pillow (M) Tipton Snow Pillow (M) Tipton Snow Pillow (M) Tollgate TV Ridge West Eagle Meadows * Wolf Creek Pillow (T) Wolf Creek Pillow (M)	Oate of Survey	8 75 75 81 38 36 81 41 46 4 71 33 31 31 34 48 46 23 566 54 4- 45 169 78 666 97 8 83 63 74 45 85 55 5106	20.0 24.1 21.9 8.2 7.3 20.5 19.3 20.9 8.2 7.8 8.1 12.2 12.2 5.4 15.0 13.3 11.9 32.4 10.0 11.7 14.3 13.2 43.9 20.6 19.8 29.6 24.2 21.6 17.8 21.3 11.0 27.7 14.9	30.8 27.6 20.4 4.6 8.4 17.0 19.6 3.2 9.6 10.5 6.6 11.2 31.2 9.2 6.6 6.4 9.7 6.1 5.3 4.7 59.9 21.2 30.6 27.0 2.6 31.2 15.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	31.1 27.6 22.7 19.4 10.8 22.5 11 5 10.2 11 5 10 5

WOMS	ТН	IS YE	AR		REC.		SNOW	TI	IIS YE	AR	PAST	
DRAINAGE BASIN and/or SNOW COURSE	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water (included)			DRAINAGE BASIN and/or SNOW COURSE		Snow Depth	Cont.	Water C (inch Last Yr.	ontent nes)
UMATILLA, WALLA, WALLA, WILLOW, ROCK, LOWER JOHN				Yr.	7,001		UPPER DESCHUTES, CROOKED WATERSHEDS		(,,,,	(III.)	Yr.	Ave.i
Arbuckle Mountain Arbuckle Mtn. Plw.(T) Arbuckle Mtn. Plw.(S) Arbuckle Mtn. Plw.(M) Blue Mountain Camp Bowman Springs Plw.(T) Bowman Springs Plw.(S) Bowman Springs Plw.(M) Butte Creek Summit Emigrant Springs Emigrant Springs Plw.(M) High Ridge Pillow (T) High Ridge Pillow (S) High Ridge Pillow (M) Lucky Strike Lucky Strike Pillow (T) Lucky Strike Pillow (M) Madison Butte Pillow(S) Madison Butte Pillow(M) Meacham Tollgate	3/2 2/28 3/2 3/2 2/28 3/2 3/2 3/2 3/1 3/1 3/1 2/27 2/27 2/27 2/27 2/23 3/2 3/2 3/2 3/2 3/2 3/2 3/2	67 57 44 34 33 45 45	19.3 20.0 14.7 12.0 15.7 11.6 10.3 23.1 29.5 23.2 14.3 13.7 13.0 17.3 9.7 11.5	7.0 8.7 0.0 24.2 13.9 9.7 6.1	20.0 13.6 5.0 6.2 1.0 5.0 26.5 14.5 10.9 5.0 9.7	b	Cascade Summit Plw.(M) Chemult Alternate Chemult Alt. Plw.(S) Chemult Alt. Plw.(M) Derr Derr Pillow (S) Derr Pillow (M) Hogg Pass Hogg Pass Pillow(T) Hogg Pass Pillow(M) Hungry Flat Irish-Taylor Pillow(S)	3/1 2/28 2/28 2/27 2/27 2/28 2/28 2/28 3/1 2/27 2/27 3/1 2/28 2/28 3/1 2/27 3/1 2/28	73 26 44 104 16 71 45 23 42 50	17.4 20.5 5.3 11.8 10.7 27.5 24.0 29.3 24.0 4.1 20.3 14.9	10.5 8.3 19.8 22.7 23.4 20.8 13.6 15.5 0.1 7.3	8.8 24.9 8.5 8.3
UPPER JOHN DAY WATERSHEDS Anthony Lake Arbuckle Mountain Arbuckle Mountain Plw.(T) Arbuckle Mountain Plw.(S) Arbuckle Mountain Plw.(M) Blue Mountain Springs Blue Mtn. Spgs. Plw.(T) Blue Mtn. Spgs. Plw.(S) Blue Mtn. Spgs. Plw.(S) Blue Mtn. Spgs. Plw.(M) Blue Mountain Summit Butte Creek Summit Derr Derr Pillow (S) Derr Pillow (M) Gold Center Gold Center Plw.(S) Gold Center Plw.(M) Indian Creek Butte * Izee Summit Lucky Strike Lucky Strike Lucky Strike Plw.(T)	2/27 3/2 2/28	51 	16.5 19.0 18.3 19.3 14.8 18.6 17.5 17.0 10.0 11.8 10.7 15.0 13.3 11.3 10.7 14.3	11.2 31.4 6.9 9.7	9.0 10.9 20.0 14.2 15.1 11.3	bb b	Ochoco Meadows Ochoco Meadows Plw.(S) Ochoco Meadows Plw.(M) Racing Creek Snow Mountain Snow Mountain Plw.(T) Snow Mountain Plw.(S) Snow Mountain Plw.(M) Summit Lake Pillow(T) Summit Lake Pillow(S) Summit Lake Pillow(M) Tamarack Tangent Three Creek Butte Three Creek Meadow Three Creek Mdw. Plw.(T) Three Creek Mdw. Plw.(S) Three Creek Mdw. Plw.(S) Three Creek Mdw. Plw.(M) Waldo Lake Whitewater Meadow * HOOD, MILE CREEKS, LOWER	2/28 2/28 3/1 2/26 3/1 2/26 2/28 2/28 2/28 3/1	44 51 48 54 44 89 30 61 22 38	11.4 13.8 7.8 13.6 14.8 11.3 11.3 22.8 17.5 5.9 17.7 7.1 10.4 14.3	10.4 12.8 11.0 14.6 10.4 14.6 24.1 20.9 3.1 15.8 6.6	8.1
Lucky Strike Plw.(S) Lucky Strike Plw.(M) Marks Creek Ochoco Meadows Ochoco Mdws. Plw.(S) Ochoco Mdws. Plw.(M) Olive Lake * Schoolmarm Snow Mountain Snow Mountain Plw.(T) Snow Mountain Plw.(S) Snow Mountain Plw.(M) Starr Ridge Starr Ridge Plw.(S) Starr Ridge Plw.(M) Tipton Tipton Pillow (S) Tioton Pillow (M)	3/2 3/2 2/28 2/28 2/28 2/28 3/6 2/26 3/1 2/26 2/27 2/27 2/27 2/28 2/28	44 51 61 44 32 35 45	13.8 7.8 17.1 14.8 11.3 11.3 8.0 9.5 5.5	5.3 0.1 10.4 12.8 19.6 2.6 14.6 10.4 14.6	9.7 2.9 8.1 17.3 3.3 11.3 5.8 11.3 5.2 9.6 12.6	b bb	Brooks Meadow Clear Lake Clear Lake Pillow(S) Clear Lake Pillow(M) Clear Lake Expt. Greenpoint Greenpoint Pillow (T) Greenpoint Pillow (M) Mt. Hood Test Site(T) Mt. Hood Test Site(S) Mt. Hood Test Site(M) Mud Ridge Pillow (T) Mud Ridge Pillow (S) Mud Ridge Pillow (M) Mud Ridge Pillow (M) Mud Ridge Pillow (M) Mud Ridge Pillow (M)	2/27 2/26 2/26 2/28 2/28 2/28 2/28 3/1 3/1 3/1 2/27 2/28 2/28 2/26 2/27 2/26	29 49 38 30 144 70 77 79	10.7 15.9 7.7 12.2 32.0 49.0 35.7 19.4 18.8 21.0 26.5 38.6 25.3	10.0 14.0 12.3 14.1 44.4 36.8 14.2 8.6 25.8	14.2 15.0

М	Α	R	C	Н	1.	1	9	7	9

SNOW	TH	IS YE	AR		F REC.	SNOW (TH	IIS YE	AR	PAST	REC.
DRAINAGE BASIN and/or SNOW COURSE	Date of Survey	Depth	Water Cont (1n.)	Water (inc	Content hes)	DRAINAGE BASIN and/or SNOW COURSE	Date of Survey		Water Cont. (In.)	Water Co (inche Last Yr.	ontent es) Ave.†
LOWER COLUMBIA WATERSHED)	WILLAMETTE WATERSHEDS(CONT.)					
Blazed Alder Pillow(S) Blazed Alder Pillow(M) Mt. Hood Test Site (T) Mt. Hood Test Site (S) Mt. Hood Test Site (M) Mud Ridge Pillow (T) Mud Ridge Pillow (S) Mud Ridge Pillow (M)	3/1 3/1	144 70 	32.0 49.0 35.7 19.4 18.8 21.0 14.3	44.4 36.8 14.2 8.6 3.3 3.7	50.6 45.9 27.5 46.6 633.4 20.8	Santiam Junction Plw.(T) Santiam Junction Plw.(S) Santiam Junction Plw.(M) Seine Creek Pillow (T) Still Creek Summit Lake Pillow(T) Summit Lake Pillow(S) Summit Lake Pillow(M) Timothy Lake Valsetz Summit Vida Waldo Lake Weaver Creek White Branch Slide	2/27 2/27 2/27 2/27 N/R 2/28 N/R 2/28 2/28 2/28 2/23 Discoi 3/2 2/26 3/2	59 61 63 89 41 htin 0 22 15	17.5 10.7	8.0 8.8 0.0 8.4 24.1 20.9 4.5 0.0 0.0 17.3 ⁴	1.4 20.8 21.8 21.8 21.9 12.4 1.6
Cascade Summit Pillow(S)	2/28 2/28		17.4 20.5	16.2	24.9	ROGUE, UMPQUA WATERSHEDS					
Cascade Summit Pillow(M) Champion Clackamas Lake Clackamas Lake Plw.(S) Clackamas Lake Plw.(M) Clear Lake Clear Lake Pillow(S) Clear Lake Pillow(M) Clear Lake Expt. Dead Horse Grade Detroit (Town) Detroit Dam Golden Curry Creek Hogg Pass Hogg Pass Pillow(T) Hogg Pass Pillow(S) Hogg Pass Pillow(M) Jump Off Joe Pillow(T) Jump Off Joe Pillow(M) Laurel Mountain Laying Creek Lookout Point Dam Lost Creek Ranch Lund Park Marion Forks Marion Forks Marion Forks Pillow (M)	 2/26 3/1 2/26 2/26 2/26 3/2 2/28 2/28 2/28 2/28 2/28 2/28 2/28	65 27 29 49 49 47 47 77 104 104 0 2 0 31 32	18.1 7.6 10.8 15.9 15.9 13.0 0.1 3.5 27.5 20.4 29.3 24.0 10.0	16.4 3.0 4.6 10.0 0.0 0.0 0.0 19.8 22.7 23.4 0.0 0.0 0.0 0.0	23.3 11.3 9.2 14.2 14.4 1.0 0.5 4.8 34.6 7.6 1- 3.8 0.6 12.0	Althouse Annie Spring Beaver Dam Creek Big Red Mountain Big Red Mountain Plw.(S) Big Red Mountain Plw.(M) Billie Creek Divide Billie Cr. Div. Pillow(T) Billie Cr. Div. Pillow(M) Caliban Caliban (Alternate) Champion Cold Springs Camp Cold Spgs. Camp Pillow(T) Cold Spgs. Camp Pillow(S) Cold Spgs. Camp Pillow(M) Deadwood Junction Diamond-Crater Summit Diamond Lake Diamond Lake Pillow(S) Diamond Lake Pillow(S) Fish Lake Fish Lake Fish Lake Fish Lake Fourmile Lake Fourmile Lake Fourmile Lake	2/27 8/1 2/28 2/22 2/26 2/26 2/26 2/26 2/26 8/2 2/28 8/2 2/28 8/2 2/28 2/28	26 96 24 61 33 55 62 65 67 61 18 33 45 31 31	6.6 14.0 12.7 9.0 10.7 9.3 10.2 12.8 14.6 18.1 18.5 4.9 13.8 9.7 12.0 7.4 7.7	36.6 7.9 25.9 14.5 17.7 15.7 32.7 28.6 16.4 27.3 18.0 19.4 8.0 	37.2 12.5 24.6 -18.6 -11.5 30.8 33.7 23.7 15.8 8.6 26.9 17.9 -11.8
Marys Peak McCredie Springs McKenzie McKenzie Pillow (S) McKenzie Pillow (M) McKenzie Bridge Mill City Mt. Hood Test Site (T) Mt. Hood Test Site (S) Mt. Hood Test Site (M) Oakridge Peavine Ridge Pillow(T) Railroad Overpass Railroad Overpass Plw.(S) Railroad Overpass Plw.(M) Saddle Mtn. Pillow(T) Saddle Mtn. Pillow(T) Saddle Mtn. Pillow(S) Saddle Mtn. Pillow(M) Salt Creek Falls	N/R 2/28 3/6 3/6 3/2 Disco 3/1 3/1	0 80 70 0 ntin 144 0	0.0 31.6 26.3	 0.0 44.4 36.8 0.0 4.6 0.0 4 0.2	9.2 0.4 38.4 0.6 50.6 45.9 14.9 2.0 9.1 11.1	Fourmile Lake Pillow(S) Fourmile Lake Pillow(M) Grayback Peak Howard Prairie Reservoir Hyatt Prairie Pillow(S) Hyatt Prairie Pillow(M) King Mountain #1 King Mountain #2 King Mountain #3 King Mountain #4 King Mountain #5 King Mountain #6 Little Red Mountain Mt. Ashland Switchback Mule Creek North Umpqua Page Mountain	2/28 2/28 2/28 2/28 2/28 2/26 2/26 2/26	49 47 20 18 29 23 8 0 0 0 66 31 34 17	10.3 13.6 9.0 5.6 4.3 6.5 7.3 5.7 2.4 0.0 0.0 15.5 8.8 9.9 5.0	24.7 27.4 21.5 7.0 4.2 0.0 0.0 0.0 0.0 0.0 27.0 0.0 5.4	20.5 8.3 7.3 7.6 5.0 1.4 20.1 13.3 3.6

SNOW	ТН	IS YE	AR		A R C) }	1 1, 1979 SNOW	TH	IIS YE	AR	PAST REC.	
ORAINAGE BASIN and/or SNOW COURSE	of	Depth	Water Cont	(inc	Content hes)		DRAINAGE BASIN and/or SNOW COURSE	Date of	Depth	Water Cont.	Water (ontent nes)
ROGUE,UMPQUA WATERSHEDS(CTD)	Survey	(In.)	(In.)	Last Yr.	Avec		LAKE COUNTY, GOOSE LAKE	Survey	(ln.)	(in.)	Yr.	Ave.C
Red Butte #1 Red 8utte #2 Red Butte #3 Red Butte #4 Red Butte #5 Red Butte #6 Seven Mile Seven Mile Pillow(S) Seven Mile Pillow(M) Silver 8urn Siskiyou Summit Ski Bowl Road South Fork Canal Trap Creek	2/25 2/25 2/25 2/25 3/1 3/1 3/1 3/1 2/28 2/23 3/1	27 16 6 0 0 66 68 27	8.0 10.8 7.D 3.3	0.0 0.D 0.0 0.0 0.0 26.7 27.0 20.7 4.7 0.0 29.8 0.0	14.6 12.0 6.6	b b b bb	Bald Mountain (Nev.) Bear Flat Meadow * Camas Creek #1 Camas Creek #2 Cedar Pass (Calif.) Colvin Creek * Cox Flat * Crowder Flat (Calif.) * Dismal Swamp (Calif.) * Finley Corrals * Hart Mountain *	2/27 2/26 2/26 2/28 2/28 2/20 -/26 /26 /26 /26 /26 /26 /26 /26 /26 /26	39 21 32 36 44 44 21 10 58 52 18 20 62 49	10.0 10.9 11.6 5.5 5.3 2.7 14.5 13.0 4.7 5.2	4.6 11.9 7.4 8.9 12.1 4.9 6.9 D.0 22.2 14.4 4.3 6.3 23.3	8.4 12.9 4.1 6.8 2.2 13.8 14.0 1.4 2.6 13.0
KLAMATH WATERSHEDS							Patton Meadows *	2/26	46	11.5	16.1	14.5
Annie Spring 8illie Creek Divide 8illie Cr. Div. Plw.(T) 8illie Cr. Div. Plw.(S) 8illie Cr. Div. Plw.(M) Chemult Alternate Chemult Alternate Plw.(S)	3/1 2/26 2/27 2/26 2/26 2/28	33 35 	9.0 10.7 9.3 10.2	36.6 14.5 17.7 15.7 10.5	18.6	50.76.6	Quartz Mountain Quartz Mountain Ext. Quartz Mountain Plw.(S) Quartz Mountain Plw.(M) Rogger Meadows * Sherman Valley * Silver Creek Silver Creek Pillow(S)	/27 /27 /27 /27 /26 /26 /26 /27	17 23 51 40 6 34	4.5 6.0 5.9 13.3 10.4 1.8 8.4		7.8
Chemult Alternate Plw.(M) Chiloquin (PP&L) Cold Springs Camp Cold Spgs. Camp Plw.(T)					23.7	Б	Silver Creek Pillow(M) State Line (Calif.) * Strawberry Strawberry Pillow(S)	/26 /24 /24	26 29 27	6.5 7.3 6.8		
Cold Spgs. Camp Plw.(S) Cold Spgs. Camp Plw.(M) Crazyman Flat * Crowder Flat (Calif.) *	- 1	36	18.5 12.5 9.4 2.7	18.0 19.4 8.9 0.0	15.8 8.0 2.2	Ъ	Strawberry Pillow(M) Summer Rim * Summer Rim Summer Rim Pillow (T)	/26 /27 /27	41 51		14.4 13.8	
Crystal (PP&L) Diamond-Crater Summit Dog Hollow * Finley Corrals * Fort Klamath (PP&L)	N/R 2/23 2/26 2/26 N/R	53 6 52	13.8 1.6 13.0	0.0 0.0 14.4 0.1	8.4 26.9 0.8 14.0 3.5	ひ	Summer Rim Pillow (S) Summer Rim Pillow (M) Sycan Flat *	/27 /27 2/26	42	10.0 10.6 6.1		16.1 8.3
Fourmile Lake Fourmile Lake Pillow(T) Fourmile Lake Pillow(S) Fourmile Lake Pillow(M) Gerber Harriman (PP&L) Howard Prairie Hyatt Prairie Reservoir Hyatt Prairie Res.Plw.(S) Hyatt Prairie Res.Plw.(M) Kirk (PP&L) Park Headquarters Quartz Mountain Quartz Mtn. Ext. Quartz Mtn. Pillow(S) Quartz Mtn. Pillow(M) Seven Mile Seven Mile Pillow(M) State Line (Calif.) * Strawberry Strawberry Pillow(M) Summer Rim * Summer Rim Summer Rim Pillow (S) Summer Rim Pillow (M) Sycan Flat * Taylor Butte Taylor Butte Pillow(M)	2/28 2/28 3/1 N/R 2/28 2/28 2/28 2/28 N/R 3/1 2/27 2/27 2/27 2/27 2/27 3/1 3/1		15.6 10.3 13.6 2.3 5.6 4.3 6.5 32.7 4.5 6.0 5.9 10.8 6.5 7.3 6.5	27.0 20.7 4.0 5.0 	2.3 4.3 8.3 7.3 5.5 50.7 5.3 	60 00	HARNEY 8ASIN WATERSHEDS 8lue Mountain Springs 8lue Mtn. Sprgs. Plw.(T) 8lue Mtn. Sprgs. Plw.(S) 8lue Mtn. Sprgs. Plw.(S) 8lue Mtn. Sprgs. Plw.(M) 8uck Pasture * 8uckstantake * Call Meadows * Delintment Lake Denio Creek * Disaster Peak (Nev.) Emigrant 8utte Fish Creek Pillow(S) Fish Creek Pillow(S) Fish Creek Pillow(M) Hart Mountain * Idlewild Camp Alternate Izee Summit Lake Creek R.S. Plw.(T) Lake Creek R.S. Plw.(S) Lake Creek R.S. Plw.(S) Lake Creek R.S. Plw.(S) Lake Creek R.S. Plw.(S) Rock Spring Rock Spring Pillow(S) Rock Spring Pillow(M) Silvies * Silvies Pillow (T) Silvies Pillow (M) Silvies Pillow (M)	2/22 2/28 2/22 2/22 3/2 3/2 3/2 3/2 2/27 2/28 3/2 2/27 2/27 2/27 2/27 2/27 2/27 2/27	58 	18.66.17.57.7.07.66.1.44.7.00 2.00 13.55.77.7.10 23.22.3.22 4.7.6.22 10.7.7.11.00 12.55.15.11.00 12.57	16.0 18.2 3.4 4.9	15.11.3 0.33.7 7.00.0 0.7 111.6 3.7 220.0 220.5 22.4 28.6 4 9.0 4
							Snow Mountain Snow Mountain Plw.(T) Snow Mountain Plw.(S) Snow Mountain Plw.(M) Starr Ridge Starr Ridge Pillow(S) Starr Ridge Pillow(M) Stinking Water Trout Creek * "V" Lake *	2/26 3/1 2/26 2/27 2/27 2/27 2/26 3/2 3/2	32 35 13 36 30	14.8 11.3 11.3 8.0 9.5 5.5 3.9	14.6 10.4 14.6 5.0 2 3.7	11.3 5.8 11.3 5.2 2.4 6.7

MARCH 1, 1979

SOIL MOISTURE

N			e (Inches)	Date of Survey		l Moisture (In	
Name	Elevation	Depth	Capacity	Survey	This Year	Year	Average
OWYHEE, MALHEUR WATERSHEDS							
8ear Creek (Nev.)	7800	72	16.8	Disconti	nued		
Big Bend (Nev.)	6700	48	16.7	Disconti		14.8	
Blue Mountain Spring	5900	42	16.9	2/22/79	5.9	12.3	9.6
Mud Flat (Ida.)	5500	48	12.8	Discontin			
Rodeo Flat (Nev.)	6800	42	11.0	Disconti		3.9	
Taylor Canyon (Nev.)	6200	48	15.1	Disconti	iuea	11.2	
8URNT, POWDER, PINE, GRANDE RONDE IMNAHA WATERSHEDS	.,						
Blue Mountain Summit	5100	36	16.8	2/28/79	9.6	15.0	11.5
Dooley Mountain	5430	36	9.2	2/26/79	2.8	3.7	4.
Emigrant Springs	3925	48	22.3	2/28/79	16.4	21.4	19.
Ladd Summit	3730	48	18.9	3/2/79 2/28/79	11.4 14.0	12.3 15.0	11.
Moss Springs Follgate	5850 5070	36 48	25.8 23.6	2/28/79	15.4	14.0	17.
UMATILLA, WALLA WALLA, WILLOW, ROC LOWER JOHN DAY WATERSHEDS	ж,						
	4340	40	12.0	2/20/70	12.5	12.5	10
Battle Mountain Summit	4340 3925	48 48	13.8	2/28/79 2/28/79	13.5 16.4	13.5	13.0
Emigrant Springs Follgate	5070	48 48	23.6	2/28/79	15.4	14.0	17.
	33.0	.0		2,23,73			.,.
UPPER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	2/28/79	13.5	13.5	13.0
Blue Mountain Spring	5900	42	16.9	2/22/79	5.9	12.3	9.
Blue Mountain Summit	5100	36	16.8	2/28/79	9.6	15.0	11.
Derr	5670	24	9.0	2/27/79	5.8	8.9	7.
Marks Creek	4540	36	14.1	N/R		11.2	11.9
Snow Mountain	6300	48	16.7	2/28/79	11.7	12.9	13.
Starr Ridge	5150	36	10.6	2/27/79	7.7	10.6	9.
UPPER DESCHUTES, CROOKED WATERSHE	DS						
Derr	5670	24	9.0	2/27/79	5.8	8.9	7.9
Marks Creek	4540	36	14.1	N/R		11.2	11.9
now Mountain	6300	48	16.7	2/28/79	11.7	12.9	13.
, KLAMATH WATERSHEDS							
Quartz Mountain	5230	48	15.3	2/27/79	7.3	9.2	8.5
LAKE COUNTY, GOOSE LAKE WATERSHE	DS						
Camas Creek	5720	42	14.5	2/28/79	11.0	12.7	12.3
Quartz Mountain	5230	48	15.3	2/27/79	7.3	9.2	8.
HARNEY 8ASIN WATERSHEDS							
Blue Mountain Spring Silvies	5900	42	16.9 16.4	2/22/79 2/27/79	5.9 12.4	12.3	9.6
Snow Mountain	6900 6300	48 48	16.7	2/27/79	11.7	12.9	13.
Starr Ridge	5150	36	10.6	2/27/79	7.7	10.6	9.
Villow-8ald	5000	24	6.6	2/28/79	4.7	6.3	5.

MARCH 1, 1979

RECIPITATION (Inches)		CURRENT IN	FORMATION	PAST F	ECORD
DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	Date of Reading	Precip- itation	Last Year	Average
Arbuckle Mountain (Morrow County)	5400	From 1/26 to 3/2	6.75"		
Billie Creek Divide (Jackson County)	5310	From 1/29 to 2/26	5.76"		
Blue Mt. Springs (Grant County)	5900	From 1/30 to 2/22	6.37"		
Bourne (Baker County)	5800	From 1/25 to 3/5	9.12"		
Bowman Springs (Union County)	4580	From 1/26 to 3/2	4.25"		
Cascade Summit (Lane County)	4880	From 1/31 to 2/28	12.00"		
Chemult (Klamath County)	4760	From 1/31 to 2/28	4.44"		
Clear Lake (Wasco County)	3500	From 1/29 to 2/26	9.48"		
Cold Springs (Klamath County)	6100	From 2/1 to 3/2	11.16"	,	
County Line (Umatilla County)	4890	From 1/29 to 3/1	3.36"		
Diamond Lake (Douglas County)	4600	From 1/29 to 2/23	15.08"		
Emigrant Springs (Umatilla County)	3925	From 1/26 to 2/28	6.96"		
Fish Creek (Harney County)	7900	From 11/2 to 2/27	21,24"		
Fish Lake (Jackson County)	4665	From 1/29 to 2/28	5.16"		
Fourmile (Klamath County)	6000	From 1/29 to 2/28	6.60"		
Gold Center (Grant County)	5340	From 1/25 to 3/1	6.36"		
Greenpoint (Hood River County)	3200	From 1/26 to 2/28	17.16"		
High Ridge (Umatilla County)	4150	From 1/26 to 2/27	10.20"		
Hogg Pass (Jefferson County)	4755	From 1/29 to 2/28	18.60"		
Hyatt Prairie (Jackson County)	4900	From 1/31 to 2/28	4.32"		
Irish-Taylor (Deschutes Courty)	5500	From 1/31 to 2/27	11.04"		
Lake Creek (Grant County)	5120	From 1/30 to 2/26	7.56"		

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

MARCH 1, 1979

PRECIPITATION (Inches)	CURRENT IN	IFORMATION	PAST R	ECORD	
DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	Date of Reading	Precip- itation	Last Year	Average †
Lucky Strike (Umatilla County)	5050	From 1/26 to 3/2	4.75"		
Madison Butte (Morrow County)	5250	From 1/26 to 3/2	3.96"		
Marion Forks (Linn County)	2730	From 1/29 to 2/28	14.52"		
Marks Creek (Crook County)	4540	From 1/29 to 2/28	4.50"		
Mt. Hood Test Site (Clackamas County)	5400	From 1/31 to 3/1	14.87"		
Mud Ridge (Clackamas County)	3800	From 1/30 to 2/28	13.08"		
New Crescent Lake (Klamath County)	4800	From 1/29 to 2/28	7.44"		
Railroad Overpass (Lane County)	2750	From 1/31 to 2/28	8.64"		
Rock Springs (Grant County)	5100	From 1/31 to 2/27	3.60"		
Santiam Junction (Lane County)	3750	From 1/31 to 2/27	16.80"		
Schneider Meadows (Baker County)	5400	From 1/26 to 3/2	5.76"		
Seven Mile (Klamath County)	5725	From 1/24 to 3/1	11.76"		
Starr Ridge (Grant County)	5156	From 1/31 to 2/27	2.88"		
Summit Lake (Klamath County)	5600	From 1/29 to 2/28	15.00"		
Taylor Butte (Klamath County)	5040	From 1/31 to 2/28	6.00"		
Taylor Green (Baker County)	5740	From 1/29 to 3/2	7.68"		
Three Creek Meadows (Deschutes County)	5650	From 1/26 to 2/26	7.32"		
Tipton (Baker County)	5100	From 1/25 to 2/28	4.80"		
Beaver Reservoir (Union County)	5120	From 1/26 to 2/26	6.50"		
Big Red Mountain (Jackson County)	6500	From 1/29 to 2/22	11.28"		
Silvies (Harney County)	6000	From 11/2 to 2/27	6.96"		

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.



K	PRES. THE ST. COSTUM. STEP	NUMBER NAME		ON ELEV	MUMBER	NAME	LOCATION ELEV	NUMBER	NAME	LOCATION ELEV	NUMBER	NANE	LOCATION 50 TAT
16	OWYHEE, MALHEUR WATERSHEDS 11 Owyhee River G6 Antelope Ridge (Ida) 20 85 1E 5900 G1 Sattle Creek (Nau) 31 46N 58E 7800	16H3AP Midas 16G7MP Mud Flat 1765a Oregon Canyo 17H6a Quinn Ridge 16G11a Red Canyon 15H6MP Rodeo Flat 15H3A 76 Creek	(Nev) 34 9S 8 40S (Nev) 9 47N (Ida) 32 11S (Nev) 36 43N (Nev) 6 44N	40E 6950 41E 6300 4W 6650 53E 6800 58E 7100	18E18 * Lake 18E22a Logan 18F1 Rock	ado Pass Prairie Creek Valley Spring ng Water	20 14S 38E 4600 32 16S 36E 4750 10 16S 33'!E 5200 13 16S 33'!E 5100 23 18S 32E 5100 34 21S 34E 4800	18E23 18E30 17D7P 17017 18021 *	Little Alps Little Antone Taylor Green West Eagle Meadows Wolf Creek Pine Cree	10 7S 37E 6200 1 7S 37E 5000 3 6S 42E 5740 32 5S 43E 5500 2 6S 37E 5700	1902P* 18E1P	Willow Creek Arbuckle Mountain Anthony Lake	33 4S 18 7S
16 15 15 17	HIMA Bear Creek (Nev) 30 45H 56E 6700 (Nev) 36 45H 56E 6700 (Nev) 25 45N 39E 6700 (Nev) 25 45N 39E 7200 (Nev) 11 45N 39E 7200	16F3AP* Silver City 18G1PA * Silvies 16G1P South Mountai 15H19a Stag Mountain	(Nev) 32 41N	3W 6400 33E 6900 5W 6340 58E 7800	BURNIT	, powder, pine, gra de, imnaha watersh	NDE EDS	1708	Schneider Meadows Grande Rande R	35 6\$ 45E 5400		UPPER JOHN DAY WATER: Upper John Day Ri	
17 16 16 18 18	C105 Bull Sasin (No.) 31 44N 53E 6650	16F6a Succor Creek 15H9MP Taylor Canyot 16H7a Toe Jam 15H8 Tremewan Rand 18G5a Trout Creek	(Nev) 29 40N (Nev) 9 39N 10 41S	53E 6200 50E 7700 55E 5700 38E 7800	105104	Burnt River		1701 1702P 18E1P 17010a 1809	Beaver Reservoir	16 4S 45E 7480 16 4S 45E 7300 18 7S 37E 7125 4 à 15 4S 41E 6700 8 5S 37E 5150	1902P * 18E16MP * 18E13M 20E4 19E3MP	Arbuckle Mountain Blue Mountain Springs Blue Mountain Summit Butte Creek Summit Oerr	33 4S 21 15S 6 12S 5 8S 14 13S
18 13 15 15	Columbia Sasin	1867a "V" Lake 16612a Vaught Ranch 16613a War Eagle	(Ida) 31 35½ (Ida) 10 11\$ (Ida) 20 5\$	321E 6600 1W 5950 3W 7700	17Eliap Ooole	Mountain Summit / Mountain ido Pass Center	6 12S 36E 5098 32 11S 40E 5430 20 14S 38E 4600 21 9S 36E 5340 34 10S 35E 5100	1808P 1806P * 1805 17013a 1706M	County Line Lucky Strike Meacham Mirror Lake Moss Spring	8 55 37E 5150 28 4S 34E 4800 28 35 32E 5050 24 1S 35E 4300 34 4S 44E 8200 28 35 41E 5850	18E8 18E24a 19E9P 1806P *	Gold Center Indian Cr. Butte Izee Summit Lucky Strike Marks Creek	21 95 5 15S 28 16S 28 3S 25 12S 21 13S 14 9S 28 4S
161 161 164 176	S5a Flyde Pask Lower (Nev) 18 42N 53E 6800 Mack Creek Lower (Nev) 9 42N 53E 7250 Jack Creek Wey 28 42N 53E 8420 Jack Peak (Nev) 28 42N 53E 8420 Jack Peak 2 30S 45E 4390 Jordan Valley 20 45N 53E 6700 Laurel Draw (Nev) 20 45N 53E 6700 Laurel Draw (Nev) 20 45N 53E 6700 Laurel Draw (Nev) 24 40S 47E 5650	Mol 18E16MP* Blue Mountair 18F6a 8uck Pasture	heur River Springs 21 153 28 295	35E 5900 35E 5300	175140 Bourne		18 75 37E 7125 33 85 37E 5800 32 115 40E 5430	1807 17011a 1707P 1803 17016a	Schoolmarm Standley Taylor Green Tollgate TV Ridge No. 2	28 4S 34E 4775 21 2S 42E 7400 3 6S 42E 5740 32 4H 38E 5070 12 2S 43E 7000	20E2 18E7a 18D7 19F1* 19E7M 18E9P *	Ochoco Meadows Olive Lake Schoolmarm Snow Mountain Starr Ridge	21 13S 14 9S 28 4S 1 19S 20 15S 34 10S
16H 176 16H 17G6 17G4 17H3 15H2	Lookout Sutte 2 40S 47E 5650 Louse Canyon 27 40S 44E 6440 Martin Creek (Nev) 18 44H 40E 6700 Oa Merritt Mountain (Nev) 10 46N 54E 7000	18E2la Bully Creek 18F7a Call Headows 17F2a Cottonwood-Ir	11 17s 29 20s dian 3 19s	37E 5300 33E 5340 39E 4320	18E8 Gold (18E6A Goodr	y Mountain tson Meadows Center ich Lake Summit	32 11S 40E 5430 18 8S 38E 5400 21 9S 36E 5340 4 9S 38E 6775 5 SS 39E 3730	1701	Imnoho Rive	16 4S 45E 7480		Tipton UPPER DESCHUTES, CROOKED Upper Deschutes	D WATERSHE
								1702P 17014a	Aneroid Lake No. 2 8ig Sheep UMATILIA, WALLA WALLA, LOWER JOHN DAY WA	16 4S 45E 7300 33 4S 46E 6200 WILLOW, ROCK, TERSHED\$ (3)	21E22 21F8 22F3 21F22 21E6*	Oald Peter Caldwell Ranch Cascade Summit Chemult Alt.	29 1 0S 30 21S 7 23S 21 27S 24 13S
C	24 23 22	21 A S H	20 I N		0 N	17	16	1903	Rock Creek Madison Butte	30 5S 27E 5250	21F4 21F6* 21E25a 21F10 21E16	Hogg Pass Hungry Flat Irish-Taylor Lionshead New Crescent Lake New Outchman Flat #2	29 18S 25 20S 1 10S 11 24S 21 18S 15 20S
			AIT CONTRACTOR	The state of the s	district Feeters			1902P * 18020 * 20E4	Umotillo R Arbuckle Hountain Bowman Springs Butte Creek Summit	33 4S 29E 5400 29 25 35E 4580 5 8S 22E 3930 29 1N 35E 3925 31 3N 38E 4150 28 35 32E 5050	21E23 22F14* 21F3 21E15 21E13*	Racing Creek Summit Lake Tangent Three Creeks Butte Three Creeks Meadows	26 18S 27 16S 34 16S
D	237/23/23	21024	Willow	Walla Wolla Rack, John Day		Burnt, Powder, Pi	naho	1804M 18019 * 1806P * 1805 1803	Emigrant Springs High Ridge Lucky Strike Meacham Tollgate	31 3N 38E 4150 28 3S 32E 5050 24 1S 35E 4300 32 4N 38E 5070	22F2P 21E24a	Waldo Lake Whitewater Meadow Crooked River	
		21053 21052		10	1807.8	17010 17016 77017 17017	17014	18016 1803	Wollo Wolld 81ue Mountain Camp Tollqate	35 4N 37E 4300 32 4N 38E 5070	19E3MP 20E1MP 20E2 19F1* 19E4	Derr Marks Creek Ochoco Meadows Snow Mountain Tamarack	14 13S 25 12S 21 13S 1 19S 8 15S
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1 1		2E1 - 2E1			18E 7 . ABEB	Place Paus Printer	~/	1902	SNOW COURSE ONLY			TIGOG KITC	
E	Willamette	2E1 02 1E6	Uppe	r John Day	18E7 9 8E8	1781	<	1902 1902M 1902M 1902M 1902m 1902a 1902a	SNOW COURSE AND SOIL MOISTURE ON SNOW COURSE SOIL MOISTURE ON SOIL MOISTURE ONLY AFRIAL MARKER ONLY	ANO AERIAL MARKER KER	2106P 2101 *	8rooks Meadows Greenpoint Reservoir	2 2S 27 2N
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E			20(te. 193)	1950 1952 1953	1827 1823 1824 18	ISE21	operated a	1902M 1902MA 1902A 1902a 1902a 1902P 1902p	SNOW COURSE AND SOIL MOISTURE: SNOW COURSE SOIL MOISTURE: SOIV COURSE AND AERIAL MAR SOIL MOISTURE ONLY AERIAL MARKER ONLY SNOW COURSE AND PRECIPITAT PRECIPITATION GASE ONLY	ANO AERIAL MARKER KER	2101 * 21020 2108* 2104 * 2109	Brooks Meadows Greenpoint Reservoir Knebal Springs At. Hood Test Site Red Hill Still Creek Switchback Tilly Jane Ulrich Ranch Junction Umbrella Falls	2 2S 27 2N 31 IS 7 3S 20 IS 28 IS 15 2S 3S 28 IS 15 3 3S
E		21E13 21E16 21E3 22E4	20(te. 193)	1953 1851	18E7 (18E1)	(SE2)	A O	1902M 1902MA 1902A 1902a 1902a 1902P 1902p	SNOW COURSE AND SOIL MOISTURE: SNOW COURSE SOIL MOISTURE: SOIV COURSE AND AERIAL MAR SOIL MOISTURE ONLY AERIAL MARKER ONLY SNOW COURSE AND PRECIPITAT PRECIPITATION GASE ONLY	ANO AERIAL MARKER KER	2101 * 21020 2108* 2104 * 2109 21028 2107P 21021	Brooks Meadows Greenpoint Reservoir Knebal Springs Mt. Hood Test Site Red Hill Still Creek Switchback Tilly Jane Ulrich Ranch Junction Umbrella Falls Maile Creeks - Mosio	2 2S 27 2N 31 1S 7 3S 20 1S 22S 3S 28 1S 15 2S 28 1S 3 3S ier Creek
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F	22 6 22 6 22 6 22 6 22 6 22 6 22 6 22	21613 21616 2163 2163 2164 2160 2160 2160	tes, Craoked	1960 1962 1962	18 E 2	16620 16620 16621 16621 16621	Jaffe 16638	1902M 1902MA 1902A 1902a 1902a 1902P 1902p	SNOW COURSE AND SOIL MOISTURE: SNOW COURSE SOIL MOISTURE: SOIV COURSE AND AERIAL MAR SOIL MOISTURE ONLY AERIAL MARKER ONLY SNOW COURSE AND PRECIPITAT PRECIPITATION GASE ONLY	ANO AERIAL MARKER KER	2101* 21020 2108* 2104* 2109 21028 2107P 21021 21030 2106P 21020 21021	Brooks Meadows Greenpoint Reservoir Knebal Springs At. Hood Test Site Red Hill Still Creek Switchback Tilly Jane Ulrich Ranch Junction Umbrella Falls Mile Creeks - Mosio Grooks Meadows Knebal Springs Ulrich Ranch Junction Lower Deschutes Clear Lake Clear Lake Clear Lake Experimental	2 2S 27 2N 31 1S 7 3S 20 1S 28 3S 28 1S 15 2S 28 1S 28 1S 3 3S ier Creek 2 2S 31 1S 28 1S 28 1S 28 1S 29 4S 41 29 4S
F	22 FT	Pica vales Upper Deschy Pica vales Pica vale	tes, Craoked	1960 1962 1962	18 E 2	Owyhee, Malheu		1902M 1902MA 1902A 1902a 1902a 1902P 1902p	SNOW COURSE AND SOIL MOISTURE: SNOW COURSE SOIL MOISTURE: SOIV COURSE AND AERIAL MAR SOIL MOISTURE ONLY AERIAL MARKER ONLY SNOW COURSE AND PRECIPITAT PRECIPITATION GASE ONLY	ANO AERIAL MARKER KER	2101* 21020 2108* 2104* 2109 21028 2107P 21021 21030 2106P 21020 21021	Brooks Meadows Greenpoint Reservoir Knebal Springs At. Hood Test Site Red Hill Still Creek Switchback Tilly Jane Ulrich Ranch Junction Umbrella Falls Mile Creeks - Mosio Grooks Meadows Knebal Springs Ulrich Ranch Junction Lower Deschutes Clear Lake Clear Lake Clear Lake Bull Run River	2 2S 27 2N 31 1S 7 3S 20 1S 28 3S 28 1S 15 2S 28 1S 28 1S 3 38 ier Creek 2 2S 31 19 28 1S
F	22 F 1 22 F 22 F 22 F 22 F 22 F 22 F 22	21613 21616 2176 2176 2176 221	tes, Craoked	19F2 19F4 19F4 19F4 19F4 19F4 19F4 19F4 19F4	18E24 18E25 18E25 18E26 18E26	16620 16620 16621 16621 16621)-16667 1666	1902M 1902MA 1902A 1902a 1902a 1902P 1902p	SNOW COURSE AND SOIL MOISTURE: SNOW COURSE SOIL MOISTURE: SOIV COURSE AND AERIAL MAR SOIL MOISTURE ONLY AERIAL MARKER ONLY SNOW COURSE AND PRECIPITAT PRECIPITATION GASE ONLY	ANO AERIAL MARKER KER	2101* 21020 2108* 2104* 2109 21028 2107P 21021 21030 21D6P 21D20 21021 21012 21022	Brooks Meadows Greenpoint Reservoir Knebal Springs At. Hood Test Site Red Hill Still Creek Switchback Tilly Jane Ulrich Ranch Junction Umbrella Falls /// Aile Creeks - Mosion Grooks Meadows Knebal Springs Ulrich Ranch Junction Lower Deschutes Clear Lake Clear Lake Clear Lake Experimental LOWER COLUMBIA WA Bull Run River Blazed Alder Sandy River Mud Ridge	2 2S 27 2N 31 1S 7 7 3S 20 1S 25 3S 28 15 2S 28 15 28 1S 3 33 ier Creek 2 2S 31 11 28 1S 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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F	Roque, Umpquo 2251 2251 2251 2251 2251 2251 2251 22	21513 21516 2152 21516 21516 22516 2	Tels, Cracked Tels,	19F2 19F3 18F2 19F4 19F4 19F4 19F4 19F4 19F4 19F4 19F4	18E24 18E25 18E25 18E26 18E26	Owyhee Malheu		1902M 1902M 1902M 1902m 1902b 1902b 1902c	SNOW COURSE SOIL MOISTURE SNOW COURSE SOIL MOISTURE SNOW COURSE AND AERIAL MAR SOIL MOISTURE ONLY AERIAL MARKER ONLY SNOW COURSE AND PRECIPITAT PRECIPITATION GAGE ONLY RAOID TELEMETRY	ANO AERIAL MARKER KER	2101* 21020 2108* 2104 2109 21028 2107P 21021 21030 2106P 21020 21021 21002 21021 21012 21022	8rooks Meadows Greenpoint Reservoir Knebal Springs Mt. Hood Test Site Red Hill Still Creek Switchback Tilly Jane Ulrich Ranch Junction Umbrella Falls //Aile Creeks - Mosic Grooks Meadows Knebal Springs Ulrich Ranch Junction Lower Deschutes Clear Lake Clear Lake Experimental LOWER COLUMBIA WA Bull Run River 8 lazed Alder Sandy River Mud Ridge North Fork Reservoir Mt. Hood Test Site Still Creek WILLAMETIE WATE Clackamas Lake Clear Lake	2 2S 27 2N 31 1S 7 3S 20 1S 20 1S 28 1S 15 2S 28 1S 15 2S 31 1S 28 1S 28 1S 4 29 4S 4 1 29 4S 4 1 29 4S 24 1 1 29 4S 25 33 26 26 5
F	22 FF	21613 21610 21610 2260 2260 2260 2260 2260 22	ake Caunty, Goase Lake 20013 20013 20013 20014 20016 20017 20016	19F2 19F2 19F3 19F4 19F4 19F4 19F4 19F4 19F4 19F4 19F4	18E24 18E25 18E25 18E26 18E26	Owyhee Malheu Orrec Orrec OTHE		91902M 1902M 1902M 1902M 1902b 1902b 1902b 1902b 1902c	SNOW COURSE SOIL MOISTURE SNOW COURSE SOIL MOISTURE SNOW COURSE AND AERIAL MAR SOIL MOISTURE ONLY AERIAL MARKER ONLY SNOW COURSE AND PRECIPITAT PRECIPITATION GAGE ONLY RAOID TELEMETRY	ANO AERIAL MARKER KER	2101* 21020 2108* 2104 2109 21028 2107P 21021 21030 2106P 21020 21021 21012 21022 21033* 21035* 21034* 2108* 2109	Brooks Meadows Greenpoint Reservoir Knebal Springs At. Hood Test Site Red Hill Still Creek Switchback Tilly Jane Ulrich Ranch Junction Umbrella Falls //Aile Creeks - Mosio Grooks Meadows Knebal Springs Ulrich Ranch Junction Lower Deschutes Clear Lake Clear Lake Experimental LOWER COLUMBIA WA Bull Run River Blazed Alder Sandy River Mud Ridge Rorth Fork Reservoir Mt. Hood Test Site Still Creek WILLAMETIE WATE Clackamas Lake Clear Lake	2 2S 27 2N 31 1S 7 3S 20 1S 28 1S 15 2S 28 1S 15 2S 28 1S 28 1S 28 1S 41 29 45 41 48 15 65

NUMBER	NAME	LOCATION 50 TAI HGE	ELEV	NUMBER	NAME	FOCULATION PIES	NUMBER	NAME	LOCATION RGE	ELEV
	Willow Creek			21E6 * 1 22E7 *	Hogg Pass	24 135 7',E 4755	21G6a	Dog Hollow	1 40S 14E	4900
1902P * 18E1P	Arbuckle Mountain Anthony Lake	33 4S 29E 18 7S 37E	5400 7125	21E4 22E3 21E5*	dogg Pass Jump-Off-Joe Marion Forks Mill City Santiam Junction Whitewater Bridge McKenzie Rive	29 11S 7E 26D0 29 9S 3E 826 14 13S 7E 3750	20G14a 22G12 * 21G4P 22G26	Finley Corrals Fourmile Lake Gerber Howard Prairie	11 36S 16E 9 36S 5E 12 39S 13E 32 38S 4E	6000 6000 4850 4500
	UPPER JOHN DAY WATERS	SHEDS 141		21E3	Whitewater Bridge McKenzie Rive	20 10S 7E 2175	22G16 22G15	Hyatt Prairie Reservo Lake of the Woods	ir 15 39\$ 3E 11 37\$ 5E	4900 4960
	Upper John Day Ri	ver	ì	21E8 22E4	Oead Horse Grade	13 16S 7E 3700	22G5 20G6MP	Park Headquarters Quartz Mountain	B 31S 66 2 38S 166	6550 E 5320
1902P * 18E16MP * 18E13M 20E4 19E3MP 18E8	Blue Mountain Summit	33 4S 29E 21 15S 35E 6 12S 36F 5 8S 22E 14 13S 23E	5400 5900 5098 3930 5670		Oead Horse Grade Lost Creek Ranch McKenzie McKenzie Bridge Vida White Branch Slide Niddle Fork Willamette		22G11 22G33 20H1a 20G9AP 20G2AP * 20G13a 21G3P *	Dog Hollow Finley Corrals Fourmile Lake Gerber Howard Prairie Hyatt Prairie Reservo Lake of the Woods Park Headquarters Quartz Mountain Seven Lakes No. 2 Seven Mile State Line Strawberry Summer Rim Sycan Flat Taylor Butte	26 335 58 20 335 61 (Cal) 21 4BN 111 4 405 16 23 335 16 25 315 14 21 335 11	6200 5725 5750 5760 7100 5500 6500
18E24a 19E9P	Indian Cr. Butte	5 15S 33E 28 16S 29F	6550 5293	22F3	Cascade Summit	7 23S 6E 4880		Power and Light Co		
1806P * 20E1MP 20E2 18E7a 1807 19F1* 19E7M 18E9P *	Gerre Gold Center Gold Center Indian Cr. Butte 1zee Summit Lucky Strike Marks Creek Dchoco Meadows Olive Lake Schoolmarm Snow Mountain Starr Ridge Tipton	28 3S 32E 25 12S 19E 21 13S 20E 14 9S 34E 28 4S 34E 1 19S 26E 20 15S 31E 34 10S 35°	5050 4540 5200 6000 4775 6220 5150 E 5100	22F8 22F6 22F7 22F5 22F4 22F14* 22F2P	Cascade Summit Lookout Point Oam McCredie Springs Oakridge Railroad Overpass Salt Creek Falls Summit Lake Waldo Lake		3 4 5 8	Chiloquin (PP&L) Crystal (PP&L) Fort Klamath (PP&L) Harriman Lodge (PP&L Kirk (PP&L)	34 34S 7 26 34S 6 22 33S 7 3 36S 6	
	UPPER DESCHUTES, CROOKED	WATERSHEDS	(5)	22 F9						1
	Upper Deschutes I	River	5400	22F10 22F13	Champion Golden Curry Creek Layng Creek R.S. Lund Park Weaver Creek	1 23S 1E 3136 31 21S 1E 1200	LA	ke county, goose l	AKE WATERSHEDS	11
21E22 21F8	Oald Peter Caldwell Ranch	29 10S 9E 30 21S 8E	4400	22F12 22F11	Lund Park Weaver Creek	22 22S 1E 1740 35 22S 1E 2440		Goose L	oke	
22F3 21F22 21E6 * 21F4	Cascade Summit Chemult Alt. Hogg Pass Hungry Flat	21 27S 88 24 13S 7' 29 18S 111	4880 E 4760 E 4755 E 4400		Mory's River		20G15a 20GBMP 20G11A 20H2a	Bear Flat Meadow Camas Creek Cox Flat	27 36S 19 5 39S 20 16 37S 10	9E 5900 1E 5720 8E 5750
21F6* 21E25a	Irish-Taylor Lionshead	25 205 68	5500 5400		Luckjomute Rive		20H3a 20G17a	Oismal Swamp Patton Meadow	(Cal) 31 48N 10	5E 7200 1 8E 6800
21F10 21E16 21E23 22F14* 21F3	Opper Destrutes of Opper Destrutes of Opper Caldwell Ranch Cascade Summit Chemult Alt. Hogg Pass Hungry Flat Irish-Taylor Lionshead New Crescent Lake Hew Outchman Flat #2 Racing Creek Summit Lake Tangent Three Creeks Butte Three Creeks Meadows Waldo Lake Whitewater Meadow	21 18S 91 1S 10S 91 33 24S S'	E 4800 E 6400 F 4800 ₂E 5600	23E2 23E3	Laurel Mountain Valsetz Summit	6 8S 7W 3000 3 9S 7W 2600	20G6MP 20G19a 20H1a 20G9AP	Bear Flat Meadow Camas Creek Cox Flat Crowder Flat Oismal Swamp Patton Meadow Quartz Mountain Rogger Meadow State Line Strawberry	2 38S 1 21 39S 2 (Cal) 21 48M 1 4 40S 1	6E 5320 1E 6500 1E 5750 6E 5760
21E15 21E13*	Three Creeks Butte Three Creeks Meadows	27 16S 98 34 16S 98	5200 5650		Tuolatin River			Abert Lo		
22F2P 21E24a	Waldo Lake Whitewater Meadow	15 <u>21</u> S 68	5600 4160	2302* 2301*	Seine Creek Saddle Mountain	25 1N 6W 3250	20G15a	Bear Flat Meadow	27 36S 1	9E 5900
	Croaked Kiver					DCUEDC III	20G18ap 20G11A	Bear Flat Meadow Colvin Creek Cox Flat Finley Corrals Quartz Mountain Snerman Valley	12 36S 2 16 37S 1	1E 6550 8E 5750
19E3MP 20E1MP	Derr Marks Creek	14 13S 23 25 12S 19	E S670 F 4540		ROGUE, UMPQUA WATE Rogue River		20G14a 20G6MP 20G10a	Quartz Mountain	2 385 1	6E 5320
20E2 19F1* 19E4	Derr Marks Creek Ochoco Meadows Snow Mountain Tamarack	21 13S 20 1 19S 26 8 15S 25	E S200 E 6220 E 4800	23G4P 22G6 22 G28	Althouse Annie Spring Beaver Oam Creek 8ig Red Mountain Billie Creek Oivide Caliban Oeadwood Junction Oiamond-Crater Summit Fish Lake Fourmile Lake Grayback Peak Howard Prairie Hyatt Prairie Reservoir	17 41S 7W 4530 19 31S 6E 6018 1 38S 4E 5100		Summer	Lake	
ноог	D, MILE CREEKS, LOWER DESC			22G21P 22G13P*	Big Red Mountain Billie Creek Oivide	31 40S 1W 6250 30 36S 5E 5300	20G2AP	Summer Rim	23 33\$	16E 7100
1100	Hood River			22G30 22G27	Caliban Oeadwood Junction	8 38\$ 4E 4600 3 39\$ 6F 5800		Silver L		
				22F19 22G14P 22G12 *	Fish Lake	3 37S 4E 4665 9 36S 5F 6000	21F2P 20G13a	Silver Creek Sycan Flat	25 & 26 29S 25 31S	13E 4900 14E 5500
2106P	Brooks Meadows	2 25 1	OE 4300	23G3 22G26	Grayback Peak	9 40S 5W 6000 32 38S 4E 4500		Warner		
2101 * 21020 2108*	Brooks Meadows Greenpoint Reservoir Knebal Springs At. Hood Test Site Red Hill Still Creek	31 15 1	1E 3850	22G16 22G22	Hyatt Prairie Reservoir Little Red Mountain Mt. Ashland Switchback	15 39S 3E 4900 25 40S 2W 6500	20GBMP 20H3a	Camas Creek Oismal Swamp	5 39S (Call) 31 48N	21E \$720
2104 * 2109	Red Hill	20 15	9E 4400 85E 3670	22G31	Mt. Ashland Switchback Mule Creek	0 252 24 2000	1961a 20610a	Hart Mountain	1 36S 15 37S	25E 635U
21028 2107P	Switchback Tilly Jane	60 3	9E 3255 9E 6000	23G5 22G5	Page Mountain Park Headquarters	5 41S 7W 4045 8 31S 6E 6550		-1127		
21021	Ulrich Ranch Junction Umbrella Falls	28 15 1		22G11 22G2	Seven Lakes No. 2 Silver Burn	26 33S 5E 6200 30 30S 4E 3720 17 40S 2E 4630		Guana		6700
L1000				22G20 22G32	Siskiyou Summit Ski Bowl Road	22 40S 1E 6000 12 33S 3E 3500	19H1 19G1a	Hart Mountain		25E 6350
	Mile Creeks - Mosie			2 2 G9	South Fork Canal	12 333 32 344	19H4a	Little Bally Mt. HARNEY BASIN	(HeV) 8 45N	195 8000
21D6P 21D20	Grooks Meadows Knebal Springs	2 2S 1 31 1S 1	1E 3850		Umpquo River			Silvies River		
21021	Ulrich Ranch Junction	28 15 1	1E 3350	22F9 22F18P	Champion Oiamond Lake	12 235 1E 4500 29 27S 6E 5315	18F7a 19F2	Call Meadows Delintment Lake	29 20S 28 19S	26E 5600
21012	Lower Deschutes Clear Lake		9E 3500	23G8 23G9	King Mountain No. 2	5 33S 4W 4500 4 33S 4W 4000	19F3 18F3P	Emigrant Butte Idlewild Camp	14 21S 27 20S	27E 5000 31E 5200
210 1 2 21022	Clear Lake Experimental	29 45	9E 3500	23G10 23G11	King Mountain No. 3 King Mountain No. 4 King Mountain No. 5	33 32S 4W 3648 33 32S 4W 3049	19£9P 18F1	Izee Summit Rock Spring	28 16S 23 18S	29E 5293 32E 5100
	LOWER COLUMBIA WA	TERSHED\$ 17)		23G12 23G13	King Mountain No. 6	20 32S 4W 1820 19 26S 6E 4215	19F1* 19E7M	Snow Mountain Starr Ridge	20 15S	26E 6220 31E 5150
				22F16 22F23	North Umpqua Red Butte No. 1	36 27S 2W 4560 30 27S 1W 4000	18F4P	Stinking Water	34 218	34E 4800
21033*	Bull Run River 81azed Alder		8E 3650	22F24 22F25	Red Butte No. 2 Red Butte No. 3	30 27S 1W 3500 30 27S 1W 3000		Donner Und 8	Blitzen River	
	Sandy River			22F26 22F27	Red Butte No. 4 Red Butte No. 5 Red Butte No. 6	20 27S 1W 2500 17 27S 1W 2000	18F6a 18G2PA *	8uck Pasture Fish Creek		35E 5300 33E 7900
21035 * 21034 * 2108*	Mud Ridge North Fork Reservoir Mt, Hood Test Site Still Creek	1 4S 24 1II 7 3S 25 3S	8½E 3800 6E 3120 9E 5400 8½E 3670	22F28 22F17	Trap Creek	1 27S 4E 3800	19G1a 18G1PA * 18G7a	Hart Mountain Silvies "V" Lake	1 36S 35 32S 31 35 S	25E 6350 33E 6900 32 ⁵ E 6600
2109	WILLAMETTE WATER				KLAMATH WATERSH Klomoth Rive				Itehorse Creeks	
	Clackomas Ri	ver		22G6	Annie Spring	19 31\$ 6E 6018	18G6a 18H1	Oenio Creek Oisaster Peak	(Nev) 8 47N	34E 6000 34E 6500
21013 21012	Clackamas Lake Clear Lake	29 45	85E 3400 9E 3500	22G13P* 21F22	Billie Creek Oivide Chemult Alt.	30 36\$ 5E 5300 21 27\$ 8E 4760	17G5a 18G5a	Oregon Canyon Trout Creek		40E 6950 38E 7800
21022 21014P	Clear Lake Exp. * Peavine Ridge 1	29 4S 14 & 15 6S	9E 3800 7E 3500 8E 3295	22G24* 20G12a	Cold Springs Camp Crazyman Flat	12 35S 5E 6100 9 34S 15E 6100 al) 30 47N 11E 5200		Harney	Loke	
21017	Timothy Lake Santium Rive		GE 3295	20H2a 22F19	Crowder Flat (C Oiamond-Crater Summit Oiamond Lake Jct. (97	3 29S 6E 5800	18G8a	8uckskin Lake	25 29\$	30E 5200
22E]	Oetroit (City)	1 108	5E 1610 5E 1500	21F18		•	•			
2252	Oetroit Oam	. 100		Map	and Index	to OREC	GON	SNOW	COUR	SES

Map and Index to OREGON SNOW COURSES



The Following Organizations Cooperate in the Oregon Snow Survey Work

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Oregon Department Of Water Resources Soil and Water Conservation Districts of Oregon COUNTY Douglas County Water Resources Survey FEDERAL Department of Agriculture Cooperative Extension Service Forest Service Soil Conservation Service Department of Commerce NOAA, National Weather Service Department of the Interior Bonneville Power Administration Bureau of Land Management Bureau of Revlamation Fish and Wildlife Service Geological Survey Department of National Defense Corps of Army Engineers PUBLIC UTILITIES Pacific Power and Light Company Portland General Electric Company California-Pacific National MUNICIPALITIES City of Baker City of La Grande City of Portland City of The Dalles City of Walla Walla IRRIGATION DISTRICTS Arnold Irrigation District Associated Ditch Companies Burnt River Irrigation District Central Oregon Irrigation District East Fork Irrigation District Grants Pass Irrigation District Hood River Irrigation District Jordan Valley Trrigation District Juniper Flat Irrigation District Lakeview Water Users, Incorporated Medford Irrigation District Middle Fork Irrigation District North Board of Control - Owyhee Project North Unit Irrigation District Ochoco Irrigation District Rogue River Valley Irrigation District South Board of Control - Owyhee Project Squaw Creek Irrigation District Talent Irrigation District Tumalo Project Vale - Oregon Irrigation District Warmsprings Irrigation District PRIVATE ORGANIZATIONS

The Crag Rats, Hood River, Oregon

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